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THERAPEUTIC ADHERENCE OF HIV/AIDS PATIENTS IN CRISIS SITUATION IN BAMENDA: A CONTRIBUTION TO MEDICAL ANTHROPOLOGY

A DISSERTATION SUBMITTED AND PUBLICLY PRESENTED ON 9th JUNE 2022 FOR THE OBTENTION OF A MASTER IN ANTHROPOLOGY

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TO MY LOVELY WIFE DORIS AND KIDS BLESSING, TRIUMPH AND RANSOM

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ABSTRACT

HIV is treated as chronic disease, but high lost-to-follow-up rates and poor adherence to medication result in higher mortality, morbidity and viral mutation. This work focuses on the "therapeutic adherence of HIV patients in crisis situation in Bamenda" Conflict and displacement is associated with increased risk of HIV transmission among affected populations because of behavioral change due to interruption of social networks and economic vulnerability as well as sexual violence and disruption of preventive and curative health services. Maintaining ARV programs in war zones can be tough. Institutional weakness, inadequate funding and the unpredictable movements of people in regions scarred by conflict pose major challenges to successful ARV treatment. There are increased chances that ARV patients will be forced to flee an area and interrupt treatment.

We had as main objective to examine the challenges faced by HIV patients in adhering to their treatment during crisis situation. We used qualitative method to assess these challenges. The study population was made up of PLWH, health workers, traditional healers and men of faith who consented to participate. Interviews, observation, life history, documentary research and questionnaire were used to collect data. Qualitative data was analyzed through Atlas ti.

Our study found many obstacles to the ART programs in the crisis area which included. Adherence to conventional treatment was found to be low due to forced displacement and mobility of the population. Barriers to adherence perceived by participants, included: security, eviction, distance, food insecurity, absence of health facilities and personnel, cost of transportation and lack of displacement and stigma. Choice of healthcare sources depended largely on availability and general health beliefs and more specifically on how the conflict has affected their treatment. Both conventional and non-conventional methods had been used to either alleviate symptoms or treat PLWH in the Region. Nonadherence to ART was found to impact healthcare utilization and costs, mortality, sexual risk behaviours and viral resistance to ART. Efforts to ensure uninterrupted care in these crisis-hit populations remain a core challenge. Efforts to retain patients using mobile counselors and health workers are effective strategies to ensure continued care.

Keywords: Nonadherence, ARV, conflict, HIV/AIDS, patients, crisis, Bamenda

RESUME

Le VIH est traité comme une maladie chronique, mais les taux élevés de perte de suivi et la faible adhésion aux médicaments entraînent une augmentation de la mortalité, de la morbidité et de la mutation virale. Les conflits et les déplacements sont associés à un risque accru de transmission du VIH parmi les populations touchées. Le maintien des programmes ARV dans les zones de guerre peut être difficile. La faiblesse des institutions, l'insuffisance des financements et les mouvements imprévisibles des populations dans les régions marquées par les conflits constituent des défis majeurs pour la réussite des traitements ARV.

Nous avions pour objectif principal d'examiner les défis auxquels sont confrontés les patients séropositifs dans l'observance de leur traitement en situation de crise. Nous avons utilisé une méthode semi-quantitative (à la fois qualitative et qualitative) pour évaluer ces défis. La population étudiée était composée de PVVIH, de travailleurs de la santé, de guérisseurs traditionnels et d'hommes de foi qui ont consenti à participer. Les entretiens, l'observation, l'histoire de vie, la recherche documentaire et le questionnaire ont été utilisés pour collecter les données. Les données qualitatives ont été analysées par Atlasti, tandis que les données quantitatives ont été analysées à l'aide du logiciel SPSS.

Notre étude a révélé de nombreux obstacles aux programmes de TAR dans la zone de crise, notamment. L'adhésion au traitement conventionnel s'est avérée faible en raison du déplacement forcé et de la mobilité de la population. Les obstacles à l'adhésion perçus par les participants, comprenaient: la sécurité, l'expulsion, la distance, l'insécurité alimentaire, l'absence d'installations et de personnel de santé, le coût du transport et l'absence de déplacement et de stigmatisation. Le choix des sources de soins dépendait largement de la disponibilité et des croyances générales en matière de santé et plus particulièrement de la façon dont le conflit a affecté leur traitement. Des méthodes conventionnelles et non conventionnelles ont été utilisées pour soulager les symptômes ou traiter les PVVIH dans la région. La non-observance du traitement antirétroviral a un impact sur l'utilisation et les coûts des soins de santé, la mortalité, les comportements sexuels à risque et la résistance virale au traitement. Les efforts visant à garantir des soins ininterrompus dans ces populations en crise restent un défi majeur. Les efforts visant à retenir les patients à l'aide de conseillers et d'agents de santé mobiles sont des stratégies efficaces pour assurer la continuité des soins.

Mots-clés: Non-adhésion, ARV, conflit, VIH/SIDA, Bamenda.

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LIST OF ACRONYMES

SIDA	**:**	SYNDROME D'IMMUNIDEFICIENCE ACQUISE
AIDS	**:**	ACQUIRED IMMUNE DEFICIENCY SYNDROME
WHO	**:**	WORLD HEALTH ORGANISATION
UNAIDS	**:**	JOINT UNITED NATIONS PROGRAM ON HIV/AIDS

LIST OF SIGLA

HIV	**:**	HUMAN IMMUNODEFICIENCY VIRUS
ARV	**:**	ANTIRETROVIRAL
PVVIH	**:**	PERSONNES VIVANT AVEC LE VIH ET LE SIDA
PLWHA	**:**	PEOPLE LIVING WITH HIV/AIDS
ART	**:**	ANTIRETROVIRAL THERAPY
TAR	**:**	TRANS-ACTIVATION RESPONSE ELEMENT
VIH	**:**	VIRUS DE L'IMMUNODEFICIENCE HUMAINE**.**
UN	**:**	UNITED NATIONS
UNHCR	**:**	UNITED NATIONS
MSF	**:**	MEDECINS SANS FRONTIERES
CDC	**:**	CENTERS FOR DISEASE CONTROL AND PREVENTION
FDA	**:**	FOOD AND DRUG ADMINISTRATION

INTRODUCTION

CONTEXT

During war and conflict, civilians are often subjected to mass displacement, human rights abuses, including sexual violence, and are left in conditions of poverty that might force them to use commercial sex to survive. The pictures are all too familiar. Hundreds of thousands killed, or greater numbers of people dead from hunger and disease and similar amounts fleeing as a result of civil wars. The stories keep reappearing: Biafra in the late 1960s, Cambodia in the second half of the 1970s, Ethiopia in the mid-1980s, the Sudan since 1983, Somalia in 1992, and Rwanda in 1994 and the former Yugoslavia throughout the 1990s. This list can be extended with numerous other conflicts of mostly smaller proportions in countries such as Afghanistan, Colombia, the Democratic Republic of the Congo (formerly Zaire),Iraq, Liberia, Nicaragua, Peru, Sierra Leone, Sri Lanka and Uganda. Which country is next? The number and the intensity of civil conflicts have increased drastically over recent decades. Many of these wars are referred to as "ethnic wars", implying that they are caused by ancient tribal hatred and that nothing can be done about them. This has been the formula easiest to accept, since it lends a patina of logic to indifference." (The New York Times, 2 January 2000). Yet, one wonders whether this is a valid assumption and whether anything can be done. Populations affected by armed conflict are frequently exposed to traumatic events and daily stressors and are at a greater risk of elevated levels of mental health disorders (Miller & Rasmussen, 2016).

The Declaration of Commitment on HIV/AIDS, adopted by the UN General Assembly Special Session on HIV/AIDS on 27 June 2001 "Calls on all United Nations agencies, regional and International organizations, as well as non-governmental organizations involved with the provision and delivery of international assistance to countries and regions affected by conflicts, humanitarian crises or natural disasters, to incorporate as a matter of urgency HIV/AIDS prevention, care and awareness elements into their plans and programs and provide HIV/AIDS awareness and training to their personnel.

Conflict and displacement is associated with increased risk of HIV transmission among affected populations because of behavioral change due to interruption of social networks and economic vulnerability (particularly among women and adolescents) as well as sexual violence and disruption of preventive and curative health services. However, competing factors that may reduce HIV risk during conflict include reduced accessibility and mobility into and out of the affected populations. These may be due to a combination of factors such as insecurity, destroyed infrastructure, and lack of resources. The interaction and outcome of these competing factors depend upon the existing HIV prevalence rates in both the displaced populations and

the surrounding communities as well as their level of sexual interaction. When the conflict ends and reconstruction begins, conditions may exist for HIV to expand rapidly in the country.
The UN system provides active support to address HIV/AIDS-related issues in emergency situations. In collaboration with UNAIDS, UNHCR developed a Strategic Plan on HIV/AIDS for Refugees for 2002-2004 which is now operational in numerous refugee situations throughout the world, particularly in East and Horn of Africa (Ethiopia, Kenya, Tanzania and Uganda) and Southern Africa (Angola, Namibia, South Africa and Zambia). Plans for expansion include Central and Western Africa as well as parts of Asia.
Maintaining ARV programs in poor, isolated regions can be tough enough - maintaining them in war zones can sometimes seem impossible. Institutional weakness, inadequate funding and the unpredictable movements of people in regions scarred by conflict pose major challenges to successful ARV treatment. The increased chances that ARV patients will be forced to flee an area and interrupt treatment - treatment that is meant to last a lifetime may in turn lead to increased drug resistance.

But hope can be found in the war-shattered town of Bukavu in the Democratic Republic of Congo, where the MSF courageously launched an ARV programme in 2002 (MSF, 2007). A year after citizens in Bukavu began receiving ARVs, the town was attacked, forcing many to flee. Despite this dramatic setback, all those enrolled on the treatment programme kept taking their daily medication. Patients were given emergency stocks when the clinics closed and MSF used local radio to communicate where patients could collect their drugs at temporary points. By the end of 2005, MSF planned to provide free ARV drugs to 900 patients in the city.

Drug- resistance is not the only cause of treatment failure. The natural history of HIV infection is very unpredictable and people respond to treatment regimes in different ways, as reported by O′Brien et al. (2000). Sub- optimal adherence itself is an important cause of failure. If people are sharing ARVs or interrupting their daily dosage regimes they simply do not get enough of the medicines for effective treatment and they will generate drug- resistance. Inappropriate use of ARVs is a multifaceted problem increasing the likelihood of drug-resistance and contributing to direct treatment failure. Policies and programs that aim to provide increased or universal access to treatment face a key challenge: in order to succeed, these programmes need to achieve an exceptionally high level of adherence for an indefinite period of time. An extensive review of interventions for improving adherence was undertaken by Haynes et al. in 2003 (Haynes, 2003). The authors define adherence as the extent to which

patients follow the instructions they are given for prescribed treatments. In this review, the term compliance, which is less commonly used today, is considered to be, in terms of measurement, the same as adherence. The term adherence is intended to be nonjudgmental, a statement of fact rather than of blame of the patient, prescriber or treatment.

During conflicts and strife, people who are living with HIV/AIDS are forced to abandon their treatment options because of the need for safety and security. This research paper looks at how this is manifested in the case of such patients in the socio-political crisis of the North West and south west regions of Cameroon.

1.1.1 JUSTIFICATION PERSONAL

Personally, I was motivated do this study because of the loss of two loved ones who fled crisis and their disease conditions deteriorated very drastically. My aunt and my niece who died in my hands abandoned their treatment and prayers and did not find it comfortable to reestablish new contacts and so their viral loads drastically increased and it led to their death. They recounted how they left their homes without an opportunity to take neither their drugs nor holy water that was available. Struggling between survival and illness was not easy. They were internally displaced and could not expose their status to anyone. This gave me the zeal to carry out this research to see hour other patients have been affected and possible proposals on how they can be helped or their situations ameliorated.

1.1.2 SCIENTIFIC

Even though there are many ways to handle patients during crisis proposed by the WHO, we still find a lot of lapses because of the availability of diverse therapeutic options that need to be tackled. Those patients who used herbalist homes, churches and other treatment options as have to be followed up. This work intends to get an in depth in the problem of these patients in crisis regions and contribute to the already existing body of knowledge so as to ameliorate the daily livelihood of these patients.

1.3 SCOPE OF STUDY

This research is limited both in subject matter and study area, **THERAPEUTIC ADHERENCE OF HIV/AIDS PATIENTS IN CRISIS SITUATION IN BAMENDA** faced with the challenges of civil unrest as the topic suggest, it concentrates only on people who can still be contacted despite the odds of the unrest. More so, emphasis shall be laid only on what this research dissertation seeks to find as objectives. However the scope of the study shall be divided into time scope and geographical scope.

1.3.1 TIME SCOPE

This study based with its descriptive and analytic nature shall be carried out successfully using the period of nine months maximum. That is, from February to October. As such, all the research activities shall be in accordance with this time frame not forgetting unforeseen circumstances.

1.3.2GEOGRAPHICAL SCOPE

This research dissertation shall work strictly on define geographical boundaries. It shall be carried out in the North West region of Cameroon, in Mezam division and precisely Bamenda . Mindful of the fact that Bamenda is a very vast town; attention shall be paid on the highest hit areas which include; Bamenda Health District. The reason for choosing this area rests on the fact that, one cannot talk about the **adherence of hiv/aids patients in crisis situation** without mentioning this district that harbors the highest number of patients. It has been noticed that, all the two parties involve in the continuation of this disorder holds this areas as target zones and thus the people in this areas do have enormous challenges as far as their daily survival and therapeutic networks are concerned.

1.4 SIGNIFICANCE OF STUDY

HIV and AIDS has been ravaging the world for above two decades and many advancements have been made as far as treatment is concerned but with the presence of crisis situations, we are always faced with the challenges of patients clinging to their different choices of therapy they may have chosen to respond to their ill health situations. This research tries to bring out these difficulties and create awareness of the reader on the gravity of the problem caused on these patients by the crisis situations.

1.4.1 To the researcher

To the researcher, this work will be important in the following ways;

- It will help to develop research skills in the researcher
- It will enable the researcher to develop theories which may be helpful in the department were the research is supervised and the educational family at large
- The work of the researcher may also be used upon as a review of literature by upcoming researchers in challenges of related values.

1.4.2 To the community

It will be beneficial to the community in the following ways;

- Since the research seeks to examine **ADHERENCE OF HIV/AIDS PATIENTS IN CRISIS SITUATION**, this research work may provide to them alternative skills added to what they have on how to better manage the situation during and after the crisis.
- Also, the community will better be sensitized on the effects of such a challenge and how to better manage it so as to prevent devastating effects.
- The research work will also raise awareness to all members of the community both those who are current and not current about the situation on ground so as to enable everyone to be on the same pace with respect to the situation on ground.

1.4.3. To the nation

Cameroon being a country noted for peace and stability both national and international has had her name four over four years dragged into the mud shall have greatly affected her reputation. As such, these of work shall be and eye opener to her in the following ways;

- The government will better be aware of the health situation of these patients on ground. This is because despite the so many reporting agents that the government have, that from an anthropological perspective will be more advantageous as the insight perspective of the people shall be better analyzed.
- Secondly, the results of this research work will better educate the government on how to manage a situation from the very beginning to as to maintain peace and stability to her citizens and ensure their general wellbeing and welfare is put at the forefront.
- In addition, with such a situation, the government from this piece of work, will better know how to better relate with national and international organizations on the distribution of aids and treatment for people living with HIV and AIDS suffering in crisis areas in the nation at large.

1.5 RESEARCH PROBLEM

HIV/AIDS has always been one of the most thoroughly global diseases. According to WHO in 2019, 76million people have been infected with about 33million deaths. During war and conflict, civilians are often subjected to mass displacement, human rights abuses, including sexual violence, and are left in conditions of poverty that might force them to use commercial

sex to survive. This may increase the rate of HIV. Conflict and displacement is associated with increased risk of HIV transmission among affected populations because of behavioral change due to interruption of social networks and economic vulnerability (particularly among women and adolescents) as well as sexual violence and disruption of preventive and curative health services. However, competing August 2003 (UNAIDS, 2006), a UNAIDS survey carried out in spring 2003 shows that among the 54 countries responding to the questionnaire, 16 (29%) had reported that the national emergency relief structure is working with the national HIV/AIDS mechanisms. The same survey pointed out that almost half of the countries (47%) reported that the humanitarian organizations had included HIV/AIDS workplace policies and programs. factors that may reduce HIV risk during conflict include reduced accessibility and mobility into and out of the affected populations. These may be due to a combination of factors such as insecurity, destroyed infrastructure, and lack of resources. The interaction and outcome of these competing factors depend upon the existing HIV prevalence rates in both the displaced populations and the surrounding communities as well as their level of sexual interaction.

The situation of the North West and South West regions of Cameroon is not an exception of crisis situations. This crisis has affected lots of groups of people and the HIV patients of these areas have not been left untouched. These patients were utilizing diverse therapeutic routes or options to relief themselves from their ailment but have be destabilized to new ways of life. They have been forced to abandon their choices of treatment either due to displacement, lack of resources or security reasons. HIV reproduces itself incredibly quickly. Missing just 5 percent of doses can allow enough time for the virus to develop mutations and build resistance to the ARV drugs. When this happens, the patient's viral load increases again and they must be prescribed a different regimen of drugs (known as 'second-line therapy'). Patients who fail to stick to their daily drug regime pose a huge challenge, especially in poorer regions where regular viral load testing is not feasible. Second-line drugs tend to be much more expensive and difficult to access, compounding the problem for sick and poor patients who require them. The International, non-governmental organisation Médecins Sans Frontières (MSF) has warned of a crisis unless drug manufacturers and regulatory authorities fast track drug availability and slash the cost of second-line drugs in Africa.

The above is what happens with those who took as therapeutic option ARVs. Others chose spiritual means, traditional and many other therapeutic options but are no more adherent to them because of the crisis situation prevailing in Bamenda in particular. This research work tries to bring out the gap the crisis situation has created in the lives of these patients making it

very difficult for them to be able to obtain treatment option of their choices it cuts across the period when the crisis started in till present and compares it with the rate of acquisition of treatment that existed before the crisis. Gun shots, burning of houses, closing down of health facilities', prayer houses, tradipractitioners fleeing amidst constant movements by these patients for safety can greatly affect the continuation of their different therapeutic options

1.6 STATEMENT OF THE PROBLEM

Maintaining therapeutic options and ARV programs in poor, isolated regions can be tough enough - maintaining them in war zones can sometimes seem impossible. Institutional weakness, inadequate funding and the unpredictable movements of people in regions scarred by conflict pose major challenges to successful ARV treatment alongside other therapeutic networks. There is an increased chance that HIV patients will be forced to flee an area and interrupt treatment - treatment that is meant to last a lifetime -- may in turn lead to increased drug resistance.(UNAIDS ,2005). This is also the case with other treatment options because of the above mentioned reasons. The complex relationship between HIV and conflict is still not well documented. Many recent publications have asserted that conflict is directly associated with an increase in HIV/AIDS transmission (Hooper, 1999; McGinn et al, 2001; Pharaoh and Schonteich, 2003). The world is facing an increase in complex series of challenges. Conflicts, disasters, economic crises and climate change. These can trigger humanitarian emergencies and destroy health systems. It can displace communities and force increasing number of people to migrate with consequent interruption or poor access to health services. This is the case with HIV patients living in the restive Bamenda. Hope can be found in the war-shattered town of Bukavu in the Democratic Republic of Congo, where the MSF courageously launched an ARV program in 2002. A year after citizens in Bukavu began receiving ARVs; the town was attacked, forcing many to flee. Despite this dramatic setback, all those enrolled on the treatment program kept taking their daily medication. Patients were given emergency stocks when the clinics closed and MSF used local radio to communicate where patients could collect their drugs at temporary points. By the end of 2005, MSF planned to provide free ARV drugs to 900 patients in the city. Other humanitarian organizations have taken up the challenge, believing ARV treatment should not be ruled out in war zones. The United Nations High Commission for Refugees (UNHCR, 2002) has developed recommendations that include the use of pilot projects to identify potential problems and a community-based approach. These are just examples in the world and Africa but they have not handled other treatment options. Many HIV patients either use one or a combination of other therapeutic options that are not always

considered but play a vital role in determining outcomes. Most write ups concentrate on the formal treatment options and tend to leave out other available options that are taken in association or independently by these patients. All of such options are affected in times of war. Longstanding grievances among North West and south west populations that had to do with marginalization, particularly in education and legal systems led to widespread protest in October 2016. Protesters met with forces of law and order and the situation escalated. This led to the breakdown of basic services sparking displacement of more than 536000 people to other regions of the country as well as 46000 people to neighboring Nigeria. Access to health care options has deteriorated in the North West and south west regions due to hostilities. Continued violence, poor roads, and lockdowns restrict the movement of people in these regions. (ACAPS, 2020). According to the office for the coordination of humanitarian affairs (OCHA), 2019, there is high risk of rapid increase in new HIV infections due to ARV supply disruption as a result of insecurity. This research will go further to access this by seeing how many people have left their treatment or therapeutic options during this period of crisis and what they have resorted to. Many programs have been drafted for other health care emergencies but none is yet put in place to curb this ill of non-adherent HIV patients who have not yet resolved on therapeutic options to adopt during this crisis situation. The problem here is to see the changes that have occurred to the daily lives of these patients and how their different therapeutic options to HIV/AIDS have been interfered by the ongoing crisis in this region.

1.7 RESEARCH QUESTIONS

1.7.1 Main research question

What are the challenges faced by HIV patients in crisis zone inadhering to their therapeutic options?

1.7.2 Secondary questions

1.7.2.1 Do patients in these restive regions still adhere to their therapeutic options?

1.7.2.2 Are there any other ways they can be followed up to adhere to their treatment?

1.7.2.3 What consequences have these caused to these patients as a result of poor therapeutic adherence?

1.8 RESEARCH HYPOTHESES

1.8.1 MAIN HYPOTHESIS

HIV patients have many difficulties in adhering to their therapeutic options in crisis regions.

1.8.2 SECONDARY HYPOTHESES

1.8.2.1 Crisis and unrest can lead to therapeutic non adherence in patients living with HIV/AIDS

1.8.2.1 Patients may resort to numerous other ways or options if they are confronted with no other choice

1.8.2.3 Non adherence to therapeutic options may result to a series of adverse consequences to the patients.

1.9 RESEARCH OBJECTIVES

1.9.1 MAIN OBJECTIVE

To examine the challenges faced by HIV patients in adhering to their treatment during crisis situation.

1.9.2 SECONDARY OBJECTIVES

1.9.2.1 Assess the non-adherence to therapeutic options by PLWHA

1.9.2.2 Analyzing the different options PLWHA have resorted to in the restive regions

1.9.2.3 Identifying adverse consequences non-adherence has caused to patients.

1.10 Methodology

According to Mbonji (2005), a method is a way or manner to tackle or approach a study. It is a path followed by the human spirit to describe and elaborate a coherent scientific discourse in other to attain the reality of the studied object. According to Harvey et al (2000), a method is defined as a variety of research approaches, tool, and techniques of collecting and analyzing qualitative or quantitative data. This research therefore will make use of the qualitative method in collecting data which will help one to get and insight view of the situation on ground. Quantitative data is also going to be collected to analyze certain rates of adherence over time. As such, data collection will exploit both the primary and secondary sources of which the primary sources will make use of interviews and life histories while the secondary sources will include; all published works such as books, articles, newspapers, magazines, reports and unpublished dissertations, thesis, conference papers, TV and radio programs.

1.10.1 Research Designs

This study is descriptive and explorative. It examines the adherence of HIV patients to their therapeutic options during crisis period or period of unrest. It describes the population composition that is highly affected by the advent of civil unrest in Bamenda and tries to explore the consequences of civil unrest in Bamenda on HIV patients and their adherence to various therapeutic options which may be formal or informal. The methodology here will be based on the qualitative and quantitative approaches also called the mixed approach. This will enable one to get an in-depth knowledge on the real life situation of the population under study and also compare and contrast figures over time to measure retention in various therapeutic centers. It will also provide opportunities for respondents to explain their respective experiences and new way of life with regards to the topic under study which cannot be obtained using only one of the techniques.

1.10.2 Sample Population

The sample population for this study shall be made up of the patients who are affected by the civil unrest in one way or the other in Bamenda and cannot adhere to their various choices of treatment options. It will include patients living with HIV (PLWH) in the restive North West region especially Bamenda. This sample population made up the victims of civil unrest in Bamenda living with HIV and obtaining various treatment types. The patients involved were adults aged 21 years and above who were involved in the utilization of treatment centers be there formal or informal. This population was made up of the indigenes and a host of other respondents who are born and breathe or resident in Bamenda irrespective of their religious background or therapeutic choices.

1.10.2.1 Sample Size

From the above categories, sixty (60) informants were used with each of them fully represented. The sample size was as follows, forty patients (40), twenty heads of treatment centers (20), 15 formal and 5 informal centers. These patients were selected at random.

1.10.2.2 Sample Approach and Procedure

This study made use of the purposive sampling approach in other to obtain a representative sampling of each of these mentioned groups who made up the research. The study made use of the purposive random technique, accidental and the snowball technique. This shows that respondents were chosen based on their experience of the therapeutic options during civil unrest in Bamenda. Accidental technique was used where the researcher accidentally meets a

suspected person who can have adequate information about the subject matter and the snowball technique was also employed to provide accessibility of respondents were access became difficult.

1.10.3 Data Collection Techniques

For the qualitative technique used here, four different techniques were used. They include; interviews, observation, life history and documentary research. For quantitative approach prospective data before and during the crisis up till present were assessed. Each of them examined below.

1.10.3.1 Interviews

From a general perspective, an interview in research is a discuss between two or more people in which there is an interviewer and an interviewee were, the interviewer has guide line questions which he or she uses to get information from the respondent to meet the research objectives. With regards to the interview guide in this study, the questions were semi open ended, differentiated in each category of respondent base on what they represented. This open questions permitted the researcher to have an in depth knowledge on the true picture on ground as responded could freely express their different experiences respectively. Interview with adults lasted from 30 minutes to an hour while that with children lasted for about at most 10 to 20 minutes in other to avoid repetition of words.Researcher also made use of the interrogative method during the interview process. This was in situations where the respondents were going out of topic and so in other to put them back on track, the researcher had to interrogate and interrupt the respondents.

1.10.3.2 Observation

Observation is a non- verbal communication technique. It deals with the other four senses in trying to understand a phenomenon under study. The observation technique was used to examine the day to day activities of the population under study. A participant observation technique was also employed. This was so because, not only the fact that the researcher was living in the area under study but because the researcher needed to participate in the activities of the people so as to enhance better analysis of the situation on ground. This observation technique enabled the researcher to understand in his field of study other interesting cultural phenomenon.

1.10.3.3 Life History

This study also made use of the life history technique. This was found very important and interesting to the researcher because all the respondents were found to be victim of similar circumstances with regards to the prevalence of civil unrest. Added to that, the researcher in question is also an inhabitant of Bamenda and as such has passed through all the precarious conditions ascertain with the challenges of civil unrest in Bamenda. This helped a lot in the research process as firsthand information could easily be gotten.

1.10.3.4 Documentary Research

Documentary research is considered as a review of documents of works of order researchers relating to your topic under study. Thus before going to the field, the researcher had read and exploited some documents which gave the researcher a set of guidelines on how to go about the research. This boosted the spirit of the researcher and also confidentiality. Documentary technique permitted the researcher to exploit secondary data on current statistics, government measures and efforts towards the situation, articles of different NGOs both national and international and lastly, the works of other researchers.

1.10.4 Data Collection Tools

Different tools were used to collect data during field work. A camera was used to take photos where necessary, a recorder was used to record interviews which helped to maximize time and not to miss any information from any informant, didactic materials such as pens, pencils, rulers and a note book to jot down information were recording was not possible. A lap top was used, where at the end of each day, the information of respondents were stored in order to misplace any information and for orderly arrangement of the day to day findings. The following were also used; interview guide, observation schedule, note books and documentary schedule.

1.10.5 Data Collection Procedure

An inform consent was carried along to the field and given out to be read be respondents before proceeding with data collection. After the reading of the inform consent, the respondent had to sign a statement of to prove that he/she is willing to give information and participate in the research. The interview guide, observation, life history and documentary research were used as instruments to solicit answers from respondents. Prior to the interviews, permission was sought if the interview can be recorded because not all respondents were patient to go through the inform consent. The researcher had five categories of questions. These questions were asked according to their levels of understanding base on the phenomenon under study. For

instance the questions for children were not the same questions for the youths and also that for the youths was not the same as those for the parents and so was the differentiation between that for government officials and stake holders. During interviews, the researcher was very active in recording, observing and jotting at the same time mindful of the fact that observation cannot be recorded. That is why book and the pen were very instrumental in most cases.

1.10.6 Data Management and Analysis

The raw data and the recorded data were gathered and it was categorized into content and iconographic analysis. The recorded data was transcribed as well as those who refused their information to be recorded. This gave a direct understanding of what an informant or interviewee was talking about at his or her on words. Data was then classified into different variables according to the research questions and objectives. As new ideas emerged in the course of the work, they were also classified. After the classification, codes were assigned to it using the Atlas-ti qualitative method analysis. These codes were according to the objectives of the research and it helped in the easy development of the work. The responses from the interview guide were read several times to ensure that no information was left out during codification. Categorization was done from the codes extracted by separating ideas into key words. After categorization and coding process, common ideas from different interviews were grouped together. This created descriptive themes which were further used for the development of the research.

1.10.7 Ethical Considerations

This research takes into consideration the autonomy and respect of the subjects under study. In this study, the goals and objectives of the research was to examine the adherence to therapeutic options amongst HIV patients in Bamenda faced with the challenges of civil unrest. A research authorization was gotten from the department of Anthropology which served as a passport through the authorities and the participants of the research process. An informed consent was used to voluntarily get respondents in the field. It will be important to note here that, anonymity and confidentiality was guaranteed to the participants and as such, the decisions of the informants were taken into consideration. The inform consent form was established with the following information; the title of the research, an overview of what the study is all about, a statement inviting all the respondents to participate in the research, the procedures the study will follow, the risk and benefits involved, guarantee of the respondents confidentiality, incentives, respondents right in the research, how to withdraw in the research.

This form serves as evident that violating and right of the respondent as they were forced to participate.

1.12 Chapter Outline

This study is divided into six chapters; an introductory analysis which constitute the background of the study, research questions, hypothesis and objectives and the research methodology. Chapter one gives a general background of study area (Bamenda), it situates the study in a historical, geographical, economic, social and cultural context.Chapter two takes into consideration the literature review relating to the topic under study. Chapter three examines the adherence to therapeutic options by HIV patients with the challenges of civil unrest.Chapter four analysis the perceptions of therapeutic adherence during crisis situation. It describes the population composition highly affected and explores the consequence of civil unrest on utilization of therapeutic options by patients. Furthermore it discourses on the actual situation of these patients viz a viz their therapeutic options, recommendations to be implemented from an anthropological perspective.

CHAPTER 1

ETHNOGRAPHY OF BAMENDA

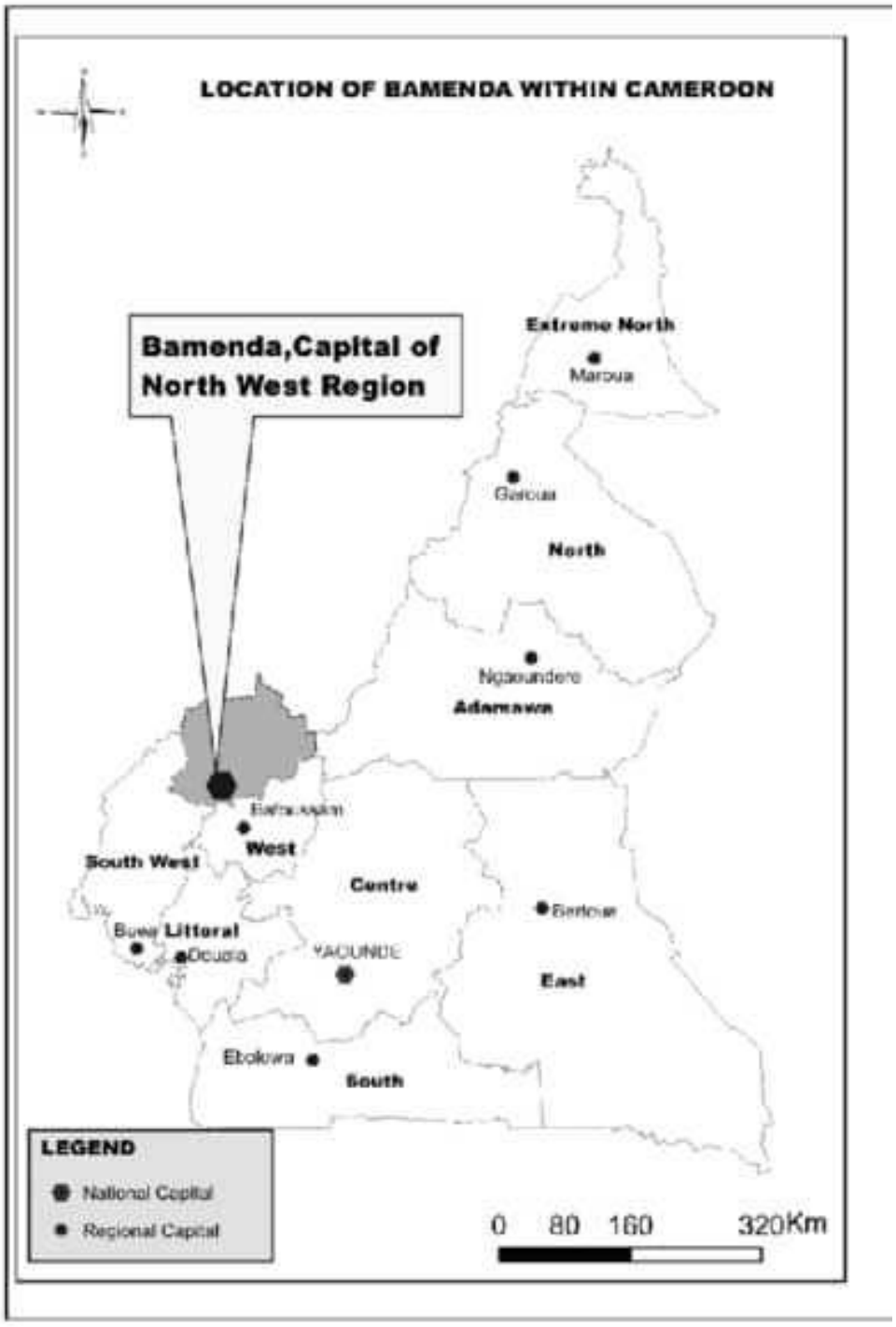
This chapter presents the background knowledge of the people of Bamenda (as partitioned under Bamenda 1, 2 and 3). It locates the people of the study area in their historical setting geographical setting, socio political organisations as well as their economic and cultural life. This chapter will therefore be sub divided in to four parts; Historical setting, where issues such as origin and the political organizations are discussed. The geographical setting here, we get to meet the physical features of Bamenda. Socio political will examine interestingly will portray the peoples lifestyle in terms of their daily survival; it look at aspects of traditional like, marriage system, birth and lots more. This chapter will be characterized by the use of maps were needed and available.

1.1 GEOGRAPHICAL SETTING

1.1.1 Location and limitation of the area

Bamenda is located in North Western Region of Cameroon, peculiarly partitioned into two sections by the east-west aligned Bamenda escarpment. The northern sector of the town comprises parts of the highland village of Njah and Mendankwe, popularly known as the Station (Bamenda 1). It overlook the low-lying and dominant sector which occupies the undulating plain stretching southwards from the original hamlet of Abakwa to incorporate parts of the Mankon, Nkwen, Chomba, Mbatu and Nsongwa. Bamenda is located along latitude 05o 58N and longitude 10o 11E and covers an area of about 290 square kms at an altitude of 11,600 meters above sea level (Community Development Plan Bamenda, 2012, Kimengsi, 2017).

Map1: Cameroon Map showing the location of North West Region



Source: ResearchGate net: Bamenda City Council (BCC), 2016

1.1.2 Population

According to the 2005 population census the population of the NWR was 1.728953 inhabitants and that of Bamenda was estimated to be 322889 out of which the urban population constituted 269,530 while sub-urban population was 53,359 inhabitants. Evaluation of the 2005 population census revealed that 18.6% of the population of the North West lives in Bamenda while national level Bamenda has 1.8% of the population of Cameroon therefore occupies the third position after Douala and Yaoundé. The surface area of Bamenda city council is 1076kilometer square with a population density of 300 inhabitants per square kilometer. However, the average population growth rate for the city dropped. Form 1976-1987 average population growth rate was estimated at 7.8%; and from 1987-2005, it dropped to 4.9%. Incomparism, national growth rate was 2.8% while Banda city council growth rate was 4.9% (BUCREP: 2005). Natural population increase was estimated at 15,822 persons per annum, while the rate of urbanization was estimated at 50.2%. The city is expanding into rural settlements or suburbs in Mankon, Nkwen, MbatuBamendankwe, Ndzah, Chomba and Nsongwa areas as the population of the city is growing. The growth of the city is agglomerated along main access to the city.

Figure 1: Population distribution of the seven villages that make up Bamenda City

Village	Total Population
Mankon	195041
Nsongwa	7000
Mbatu	3964
Chomba	5551
Mendakwe	8833
Ndzah	2500
Nkwen	100000
Total	322,889

Source: Grass field participatory and Decentralized Rural Development Project (GP-DERUDEP) 2012 p.52

1.1.3 Relief and structure

Bamenda is divided into 2 physical features: the high plateau (up station) in the south with an average altitude of 1500m and a low plateau (down town) with an average altitude of about 1.100m. All the seven villages of the urban council area are located in different altitudes. For instanceMankon is located at an altitude of 2.55.4m, up station 437.6m, Bamendakwe1529.7N, old town 126m, Mbatu 130m, Chomba 1352m above the sea level.

1.1.4 Climate

Bamenda, just like every other area in Cameroon is characterized by two categories of climates; the rainy and the dry season. The dry season begins form mid-October to mid-March. While the rainy season starts from mid-March to mid-Octobre. It is the North east trade winds that usher in the dry season and Southwest monsoon that ushers in the rainy season as they blow over the town. The North east trade winds (hamatan) blowing from mid-October cause's dryness and high temperature. The planting seasons begins with the coming of the rains. The annual rainfall is 2.700mm and the highest rainfall is registered between July and August. It has the temperate mountain climate with the highland being fairly cold while the plan is hot. The nature of the area also causes a slight variation in temperature (Anschutze, 1995). The mean annual temperature in the region is about 25.0oc the highest temperature is recorded in the month of February 28.1oc

1.1.5 Topography

Bamenda show a wide variety in its relief, with altitudes ranging from 800m above sea level to about 2600m above sea level. Characteristic features include many hills with gentle to steep slopes. Most of the high altitude parts of the area lie on the highland mountain chain of the North West and West Regions of Cameroon.

1.1.5 Vegetation

Situated in the Sudano-Savanna Zone, the area is endowed with types of vegetation. The landscape is mainly grass with fringes of forest along the gentle slopes and narrow valleys. Fulani's occupy the grassland areas of the mountain slopes for grazing. Extensive grass cover can be found on hills in carpet-like shape, which gives a touch of beauty to the landscape. However the vegetation types have greatly degenerated over the years. This has been as a result

of constant bush fires set by grazers and sometimes by farmers who practice slash and burn. Some of the forest is being exploited for timber and clearing to extend farming land. The area is also very rich in planted eucalyptus trees.

1.1.7 Soil Type

The climate condition has impact on the soil formation and its influence, creates the uniformity over the area. The thin brown lateral soil s especially on hill tops and slopes has low humus content thus reflecting a decreasing rate of fertility (mankon village study report). Erosion acts on the slopes of the hills and deposits in the valleys to form alluvial or sedimentary loams for example, mezam river valley has fertile alluvial soils for agriculture. The eastern parts made up of Ndzah and Bamendakwe are made up of volcanic soils, while the western are sandy, clay, and loamy. The lateritic/loamy soils are used for the making of sun-dried bricks. Crops like corn, sweet potatoes, beans and cocoyam are grown in the rich valley soils. However, eucalyptus trees are planted in some of the areas, which have heavily leached soils.

1.2 Historical Background/Setting

The North West is one of the ten regions of the Republic of Cameroon. Cameroon is situated between west and central Africa. It is bounded by Chad to the North, Equatorial Guinea, Gabon, Congo and the Atlantic Ocean to the south, Nigeria to the West and Central African Republic to the East (Mukum, 2005). Cameroon has an estimated population of 24,534,017(population, 2017) following the population census carried out in 2005 and published in 2010. The North West region has 1.804.695 inhabitants with Bamenda as its capital. This region is made up of 7 divisions namemy, Boyo; Bui, Ntunga-Mantung, Menchum, Mezam, Ngoketunja and Momo.

1.2.1 Origin of Bamenda

Bamenda was founded in 1901 as result of the transfer of the German built station in Bali in 1890 to Mendakwe village. When Dr. Eugen Zintgraff and his collaborators visited the grass fields, they named this area “Bamenda”, (meaning the people of Menda). It is from this that the town Bamenda derived its name (Neba, 1987). The people of the North West region are said to be semi Bantu with a dominant Tikar ethnic group. The Tikars are believed to have come from a region beside Garoua from Nigeria and were forced to miograte westward towards the Adamawa plateu in the 14-15 centuries. The Tikars constitute the inhabitants of Donga-Mantung, Menchum and Mezam divisions. Bamendas principal ethnic group is the Ngeumba for defense purposes. The Ngeumba tribe became so large that the people decided to name the

upper part santa and the lower part Bamenda which consist of 7 villages: Mbatu, Chomba, Nsongwa, Mankon, Nkwen, Mendakwe and Santa.

Bamenda was subjected to German colonialism in the late 19th century, and after the defeat of the Germans in World War 1, (1914-1918) the League of Nations shared German colonial terretories among victorious nations. Western Cameroon (the present day North West and South West Regions) were administered jointly with Nigeria under the protectorate of the British until 1961 when following a plebiscite, it attained independence b joining the then already independent republic of Cameroon. The British colonial administration, which succeeded the Germans after the First World War, made the area the capital of Bamenda province, an administrative unit in the then southern Cameroons. It became the capital of Bamenda Division in the former west Cameroon, then Mezam division and of the Bamenda central sub Division and finally of the North West province and now Region following the restructuring of the administrative areas of the Republic. (Wikipedia, 2077)

1.2.2 Political Organization

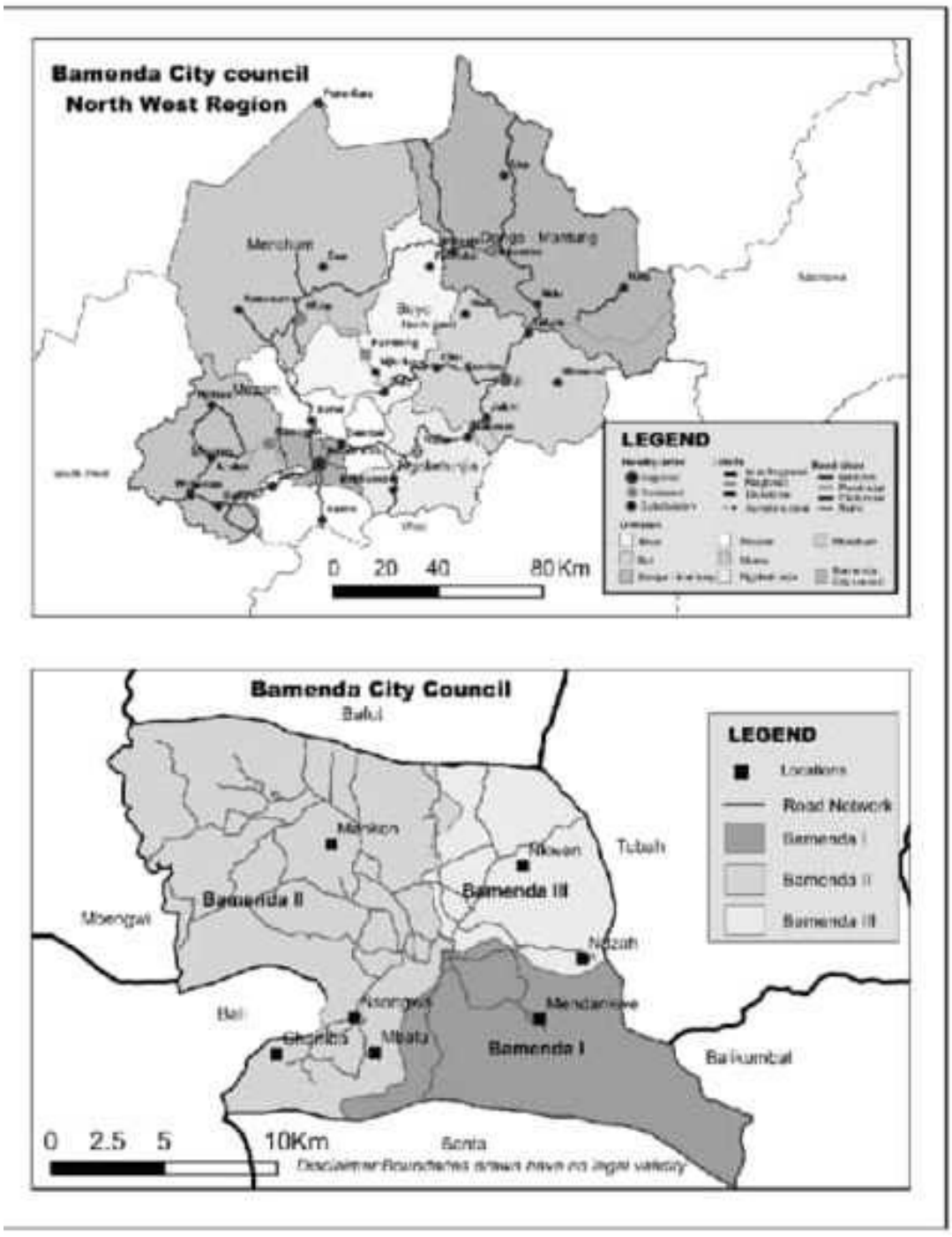
Bamenda gained the status of a city on the strength of a presidential Decree of 17th January 2008 that created the Bamenda City Council (from the defunct Bamenda Urban Council). The cosmopolitan city is expectant of a fresh push in development since the Presidential Decree of 17th January 2008 dissolved its urban status and created Bamenda 1, Bamenda II, Bamenda III Councils and the Bamenda City Council. The Bamenda City Council is the in dire need of development, land use planning, road infrastructure, public lighting, greater access to potable water, urban forests, green spaces, etc. The Bamenda City Council is the biggest and only City Council in the North West Region of Cameroon. In this position, the City Council has a major leadership responsibility. Thus, the City Council, with its new leadership, is considerable ways and makes Bamenda a major attraction and tourist destination in consirable ways and makes Bamenda a major attraction and tourist destination in Cameroon. The growth of the city of Bamenda is directly interwoven with that of its environs.

1.2.3 Traditional Organization

The political organization embodies the Fon and his people. The Fon resides at the palace which forms the village capital. The palace contains lodge for societies and council meetings. The Fon is well respected and greeted by the commoners through the hand clap and talking to him through attendant (nzndya). He keeps guard at the palace and receives all visitors coming in to the palace. The Fon is responsible for maintenance of peace, orders and good governance.

Quifor is the name given to the most power institution of the lower Ngemba chiefdom. This regulatory system is made up of male members only and they must undergo ritual initiation. Membership is made up of two class of people: those who are not from royal families or those who have lost their lineage and the second class is that which is made up of persons of common birth and have acquired the Ngemba nationalism. The elderly members are title holders and members of the traditional council. It is responsible for the burial of princes and notables and takes part in funeral ceremonies of their members have the pre-occupation to control and guide the conduct of the Fon. Women have their own traditional titles which they acquire either in relation to royalty or through gaining educational or political powers.

Map 2: Map of North West showing the location of Bamenda (Mezam)



Source: ResearchGate net: Bamenda City Council (BCC), 2016

Bamenda has enjoyed a position as the largest and most influential administrative and commercial centre in North West region. The growth of the city is stem from the establishment of Bamenda as regional administrative Centre by the colonial leaders. Subsequent

establishment: as a regional capital of the North West Cameroon; Divisional headquarters of Mezam division and sub divisional headquarters of Bamenda I, BamendaII, and Bamenda III in accordance with administrative system in Cameroon. Other potentials of the city's growth are that, it is a primate city in the North West region, Commercial nerve center of the North West and beyond; and a gateway city to Western region of Cameroon, Southwest Region of Cameroon; and also gateway for Trans-African Road to Central Africa Republic and Federal Republic of Nigeria.

1.3. SOCIO-CULTURAL ORGANISATION

1.3.1.Social organization

The social organization of this community considers the family as the most important unit around which other social organs evolve. Traditionally, every person was born into a family. The set up was typically African and much importance given to households and extended families. Here all the relatives are integrated. The nucleus and the extended families settled in what was called compound. A compound is a composition of household and varied in size and structure. The smallest compound contained two houses and was occupied by a nuclear family. Family activities were carried out in groups; family life and activities included meetings, farming, hunting and building of houses. Thus family life is based on the mutual and collective help geared towards maintaining the family lineage.

1.3.2 Cultural setting

As the Regional capital of the North West Region, Bamenda is the melting pot of cultural groups from across the Region and beyond. Some of the streets are named after major tribal groups that inhabit the city, groups that provide divers cultural centers, sports academy, museums, handicraft centers, royal palaces, ancient architectural structure makes for a very friendly cultural atmosphere. The culture of the people is portrayed mainly through their music, dressing, housing, craft and food. Although many aspects of the culture have changed, the Bamenda man still believes in maintaining his tradition and culture of the people lives on.

1.3.3 Marriage

Marriage is one of the oldest cultural customs in every human society. No matter the method used, but it resulted to the coming together of a man and woman with main objective of having as many children as possible. Prior to the colonial era, a father had to provide his sons with his first wife and was responsible for negotiation of the marriage. Marriage age rages from 15-18years. Once the marriage was accepted, the suitor starts performing some services. All these

activities were alongside payment of the bride price. After the payment of the bride price and the performance of relative's services, the girl was to undergo some traditional right. Polygamy was highly valued amongst the grass field because it enhances economy of the household in terms of agricultural activities. Endogamy and exogamy were both practiced here. And three types of marriage system existed. Ngoo Manyie (marriage by consensus) was a marriage that was contracted after the suitor house at night by a group of relatives with Bamboo lights known as Nka. The 2nd is the USA Mangyie (marriage by elopement). This type of marriage was contract by two persons only the suitor met the girl and negotiated with her and both ran away to the groom and celebrated their wedding. The bride price was paid after the marriage had been consummated. And the 3rd is the mixture of the two systems. Here the suitor pays the bride price but does not wait for his wife to be brought at night with torches. He elopes with his wife to his home. The rest of the marriage formularies were done when the bride and the bridegroom were living together but never during pregnancy of the wife.

1.3.4 Birth

Birth was considered as an important bond between the husband and the wife just like it will be in the Africa context, it sealed the marriage and besides it ensures the continuity of the society. Woman who gives birth to twins are highly honored and called "Manyie" and the man is called Tanyie. The children bare names ending with Nwie" meaning gift from God almighty. In cases were simultaneous births occur after twins in the same area, the twin followers names are given to these children. The grand fathers and gran-mothers names are honored and given to these children.

1.3.5 Death

The passing away of the village member is a very sad event. People abandon their daily activities for weeks in mourning and burial. In cases of the Fon death, the eldest see the body. They prepare him to meet his ancestors with everything he needed to ease his journey. The grave is dug with the sister and sons who acts as intermediaries between the Kwifor and Takembeng. After the burial, the death is made public and everybody is rubbed with wood ash as a sign of sorrow.

1.3.6 Food, Dressing and language

The main traditional dish in the area is Achu made from pounded cocoyams. The paste is eaten with Yellow soap (a mixture of palm oil and lime stone "Nikii") or the traditional Black soup. The traditional drink of the raffia palm wine considered as a drink for men and drunk alongside

Kolanuts. The traditional dress is the embroidered material made in several colours common in the North West Region. The characteristic traditional caps and gowns are common. Today, many of city inhabitants are English-speaking, and Cameroonian Pidgin English is the lingua franca in the shops on the streets of Bamenda.

1.3.7 Religion

There are three main types of religious practice in the communities; Christianity, Islam and Animism (traditional religion) constitute the main religious bodies in this area. Christianity is the largest religious body introduced from foreign culture. It has greatly contributed to the development trend in the Fulani settlements. The Islamic has also contributed greatly to the development trend in the various communities like opening of schools and hospitals. Islam is significantly practiced in the Fulani settlement. The Islamic has also contributed greatly to the development of the area especially in the domain of education through the opening of Islamic schools in some area and of the Sub-division. Traditional religion with ancestral worship is very common in all the villages of the Bamenda area. The country Sunday is one of the eight days traditional week, which is set aside by each villager for the performance of the traditional rites and ancestral worship. In some cases annual sacrifices are offered to ancestors, usually by mandated sacred societies, to request their blessing in soil fertility, abandon rain, high crop yields among others. It often involves the use of animals such as goats, sheep and birds such as fowl) as well as palm wine which is believe to be liquor highly cherished by the ancestors.

1.3.8 Education

With free public primary education, there is virtually a primary school in every backyard, and the best of secondary education is offered by the religion bodies. Two official University have their antennas located around Bamenda (University of Bamenda and catholic university) and private institutions makes for 90% of the over 15 post-secondry tertiary educational facilities, with a bias for technology, vocational training, and mechanized agriculture. Bamenda hosts and harbours some of most prestigious Secondary and High School establishment in Cameroon, to which increasing heavy inflex of students, especially student form French- speaking Cameroon, is continuously on the rise. Officially there are over 156 nursery schools, 180 primary schools, 37 secondary schools, and 2universities recognized by the state. (CDP 2012). The government however, provides only 24% of the total existing schools in Bamenda city. A number of professional schools, 4 polytechnics, 1 school of sports, 1 cooperative college and 6 training schools for health personal. However, other institutions of higher learning still in

search of recognition also exist. These include Bamenda University of Science and Technology, international university amongst others.

1.3.9 Organization and associations

In the city, there exist many Community Base Organizations (CBOs), Non-Government Organizations, village development and cultural associations. They work in the domains of rural infrastructural, the construction of health centres and schools, advocating for human righsand social welfare, providing equipment's to schools, construction of water catchment and environmental protection, agriculture development.

1.4.1 ECONOMY

The economy of the Bamenda city council comprises both the formal and Informal sectors, involving friendly and competing interest groups. The interaction between these economic interest groups within the Bamenda economy is largely peaceful and constructive. Bamenda also about people known to be poor and proud, with few government enterprises to absorb the unemployed. Activities of the primary sector undertaken by the residents of the Bamenda City Council are mainly farming (both crops and livestock), sand and stone quarrying and exploitation of timber from eucalyptus trees. The activities of the secondary sector, which are mainly informal, revolve around: Small scale processing of cassava in to garri and "water fufu", small scale transformation of milk in to yoghurt, slaughtering of cattle on a daily bases at the city slaughter house, Tranormation of feedstuffs, into animal feed, Wood works, Metal works, Tailoring, Embroidery, Caving and crafts, Soap manufacture and Fibred bricks. The activities undertaken under tertiary sector include: Services offered by public services and private companies eg government offers, banks and Micro Finance Institutions (MFI). There are several markets in Bamenda city both daily and weekly market: Bamenda main market situated in within the Central Business District, Nkwen market, Ntarikon market, Bali park market, mile 4 Nkwen market, Mbengwe park market, and mile 8 Mankon market. The weekly markets are commonly in sub-urban areas of the serven Fondoms constituting Bamenda City Council. Shopping streets are across the city extensively along the major roads in to the city.

1.4.2 Agriculture

Agriculture is the major activity of the population of the Northwest region. It is a source of livelihood. The famers embark on any means possible to increase crop productivity. This is also achievable by increasing the number of workers in the farms (unskill labour). About 70% of the Northwest is involved in agriculture (regional delegation of agriculture).It is practiced

for home consumption and for the local market be it in cash crop or consumable crop. In the 1990s most of the youths started abandoning agriculture and moved to educational career and others moved to urban zones to search for greener pastures or white collar jobs. Other youths moved from the farming area or villages to sub divisional, divisional levels or regional levels to learn a trade. Thus this made them available to offer their services to the rich in order to gain these trades in return. The major problems faced by the farmers within this area include: Farmer grazer conflicts, High price of inputs such as fertilizers and improved seeds varieties, poor farm to market roads, Lack of finances to purchase inputs, post-harvest losses, marketing.

1.4.3 Animal rearing, Hunting, Forest exploitation and craft

Livestock rearing is also a major economic activity in the area. Main species include cattle, goats, sheep and fowls, Cattle rearing are the main market –orientation speculation in this domain, and are mostly carried out by the Mbororos who are settle in the area. Forest exploitation is mainly through the exploitation of the eucalyptus plantation. Eucalyptus plantation transactions are present in the entire area. They are exploitation local use and also for commercial transaction. A greater majority is commercialized along the main roads as firewood and as electric poles through middle men to supply to AES SONEL in the Western region of Cameroon after primary processing. The people are involved in some small craftwork. This concerns woodwork for masks, statues.

Common craft works, mostly done by men of the area include bamboo chairs, carvings, traditional growns and antiqure characteristic of most grassland cultures. Craft works by women are mainly bamboo and elephant stalk baskets and embroiling a wide variety of local baskets and beads, markets and offices.

1.4.4 Financial Institutions

Financial institutions, notably banks and micro finance institutions have prominent place in the city's economy. New bank are gradually making a head way into Bamenda. Meanwhile, existing competitors keep reinforcing their existence, and in some cases, are considering expansion possibilities. A case in point is the Cameroon Credit Union League, spread all over Cameroon, with headquarter in Bamenda. It is worth noting that the Azire credit union, which is so far the biggest micro finance institution in the whole West Africa, has its headquarters in Bamenda.

1.4.5 Housing

In Bamenda housing is made up of the typical mud blocks and corrugated iron sheets. The traditional housing patterns of the area have been greatly modified over the years. Thatched houses that were formally popular are no longer common in the communities, giving rise to modern and durable house construction pattern. Thus the traditional mud brick house characteristics of grassland people are common in all the villages. The small difference lies with the Fulanis who have their traditional round huts, which are also now getting gradually replaced.

1.4.6 TOURISM

The city is endowed with very rich and varied tourist's potentials that can be classified into two categories natural and artificial sites. The natural sites are made up of landscapes, caves, secret forest which are found around palaces and harbour a lot of bird and plant species, rivers and hills. The artificial sites may include the palaces, museums, monuments, arts and artifacts. The city has one of the richest heritages in the region. Despite the rich endowment of the city with great tourist potentials more than 70% of these sites remain largely underdeveloped or completely neglected. The Bamenda prescraft and handicraft shops display specimens of fine handicraft works. In Bamenda, there are cultural sites such as the monkon Fon palace with its newly constructed museum, and the Bali Fon palace with its ancient architectural structures. The mountainous terrain around the city affords scenic views such as from the sabga hill over the Ndop plain, some 15km from the city of Bamenda.

1.4.7 Health

Health care delivery is very limited in Bamenda city. It is provided both by the state and the private sector. The city harbours the only Regional Hospital and specialized units. There are 30 health institutions, 13 pharmacies and 15clinics distributed within the city. The number is inadequate and the services are limited.

1.4.8 Road Network

Road network in Bamenda is characterized by poor connectivity and linkages. Urban roads in Bamenda can be classified into; regional roads, primary distribution roads, secondary distribution roads, collector and access roads. Regional roads are paved with a size of 8m which are limited in capacity. Primary distributor roads are between 6m-7m wide with no shoulders. Most of the roads were paved more than 30 years ago and are characterized by potholes and

poor drainage systems. Secondary distributor roads are unpaved, narrow and are generally characterized by gullies, no culverts, and no drainage.

This chapter has situated the city of Bamenda into its historical, geographical, and economic and socio cultural context. Though Bamenda city is divided into Bamenda 1, 2 and 3, they all share common features like economic activities and cultures. The value of children is all regarded the same. The road networks are there and the extended family system generally in the North West makes trafficking easier. The growth of the city in population and the economic domain causes people to assist time as they go about their daily hustles and bustles. This chapter has therefore brought out those historical, economic as well as cultural factors from which trafficking could be traced or evolved.

CHAPTER 2

LITERATURE REVIEW, THEORICAL FRAMEWORK AND DEFINITION OF CONCEPTS

This chapter comprises of reviewing literature on the therapeutic adherence of HIV/AIDS patients during crisis and unrest. It appraises the works of other authors in different war or conflict affected areas in the world. It takes a look at different methods that have been used to carry out such works as well as theories that were used. It acquaints us with concepts, theories and terminologies appropriate to the topic. Current as well as past trends of correlations between conflicts/wars and therapeutic adherence are compared and contrasted so as link with our work logically and make it original. This part of the work is divided into parts which go a long way to clarify the aforementioned goals.

2.2 BRIEF HISTORY OF HIV

HIV AND AIDS: AN ORIGIN STORY

When HIV first began infecting humans in the 1970s, scientists were unaware of its existence. Now, more than 35 million people across the globe live with HIV/AIDS. The medical community, politicians and support organizations have made incredible progress in the fight against this formerly unknown and heavily stigmatized virus. Infection rates have fallen or stabilized in many countries across the world, but we have a long way to go.

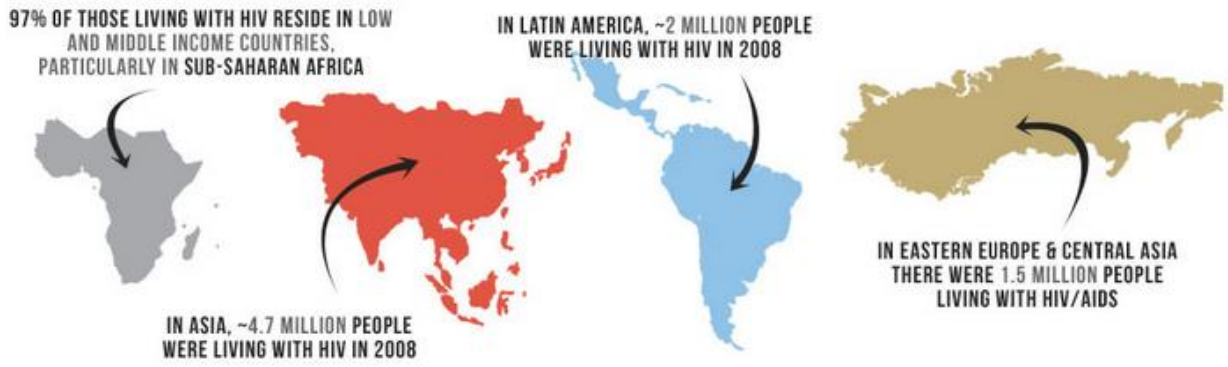


Image via aids.gov. The WHO estimates that 97 percent of the world's HIV positive population lives in low income nations where anti-viral treatments are scarce or unavailable.

1980s

Beginning in the early 1980s, new and unusual diagnostic patterns began to emerge in different parts of the world. A benign, fairly harmless cancer called Kaposi's Sarcoma, common among the elderly, started appearing as a virulent strain in younger patients. Simultaneously, a rare, aggressive form of pneumonia began to crop up with alarming frequency in another group of patients. This pneumonia sometimes evolved into a chronic condition, which was something specialists had never seen.

By 1981, scientists had begun to connect the dots between these new diagnoses, plus a number of other opportunistic infections. By the end of the year, the first case of HIV's full-blown disease state, Acquired Immune Deficiency Syndrome (AIDS), was documented (UNAIDS, 2007).

Featured Online Programs

At this point, there was no direct line connecting these early infectious diseases to AIDS. It took researchers several years to fully establish the connection. The initial concern of the medical community was one of contagion, as these mystery viruses apparently spread rapidly among affected populations and began with few symptoms. It was noted early on that young gay men were most likely to receive an HIV diagnosis; a secondary population of needle-using drug abusers was quickly identified as an at-risk patient group. It would be the middle of the following year before it was suggested that HIV was either sexually transmitted or blood-borne on dirty needles.

Identifying the New Syndrome

The early months and years of HIV and AIDS research were marked by rapid change. Scientists not only grappled with a new killer illness that was poorly understood, but the virus itself exhibited new characteristics almost as fast as researchers could identify them. Hemophiliacs, who routinely receive blood transfusions, were also identified as an at-risk patient group. An AIDS outbreak in Haiti (Macias-Chapula, 2000). further added to the confusion. New cases of heterosexual transmission reinforced early theories that HIV was purely sexually transmitted; however, this theory had to be discarded as mother-child in uterotransmission was documented.

There was considerable disagreement among the medical community about how to refer to this new syndrome. Given the sociological parameters of known HIV patients in 1982, early scientists labeled the group of mystery illnesses as a gay-related immune deficiency, gay cancer or community-acquired immune dysfunction (UNAIDS, 2003). Ultimately, as groups of at-risk patients broadened, researchers dispensed with population-based terminology. By this time there were nearly 500 documented cases in 23 states, all of which had appeared within a year's time. Other countries across the globe experienced similar outbreaks, and the CDC and WHO began to glimpse the true scope of this scourge.

Particularly in its earlier years, HIV was only understood to be viral, deadly, and highly contagious via unknown means. These variables led to considerable panic on the part of professionals and laypeople alike. Fear fueled prejudice of populations perceived to be at the highest risk for HIV infection. Drug users and homosexuals bore the brunt of the discrimination.

In one national broadcast, televangelist Jerry Falwell echoed the sentiments of some conservative Americans by declaring God had sent AIDS as retribution for the sins of drug using and gay communities. Individuals far outside of at-risk populations overreacted to potential exposure to HIV; mass hysteria resulted in reactions like hemophiliac student Ryan White's expulsion from middle school and a number other forms of unwarranted discrimination.

Public Policy Responds

As scientists closed in on the source of this illness, public policymakers in America reacted to the epidemic. Bathhouses and clubs catering to gay clientele were closed down, and law enforcement personnel were issued gloves and masks to protect them against potential exposure. The first needle exchange programs were instituted; the FDA began to consider whether the nation's supply of banked blood was safe. The concept of "safe sex," now considered standard behavior, was first introduced to the global populace.

In late 1983, the global presence of the mysterious virus motivated European authorities and the WHO to classify the growing number of diagnoses as an epidemic. In addition to the outbreak in the U.S., patients with similar symptoms were documented in 15 European countries, 7 Latin American countries, Canada, Zaire, Haiti, Australia and Japan. Of particular concern was an outbreak in central Africa among heterosexual patients. In the U.S., the mortality rate approached 100%. The first annual International AIDS meetings were held in 1985.

At the end of 1986 and the beginning of 1987, the U.S. Food and Drug Administration (FDA) administered a clinical trial of Azidothymidine (AZT), the first drug to prove effective against the rapidly replicating HIV virus (Fischl MA, 1987). Originally a chemotherapy drug, AZT worked so well during its trial that the FDA halted the trial on the grounds that it would be unethical to deprive those patients who received a placebo of the actual drug.

1990s

By 1993, over 2.5 million cases of HIV/AIDS (WHO, 1994) had been confirmed worldwide. By 1995, AIDS was the leading cause of death for Americans age 25 to 44. Elsewhere, new cases of AIDS were stacking up in Russia, Ukraine, and other parts of Eastern Europe. Vietnam, Cambodia and China also reported steady increases in cases. The UN estimated that in 1996 alone, 3 million new infections were recorded in patients under age 25.

Countless deaths in the U.S. entertainment industry, the arts and among professional athletes deeply affected these communities — and the rate of death would not slow significantly until 1997. During this time the U.S. government enacted legislation that directly affected HIV-positive people. These individuals were legally prohibited from working in healthcare, donating blood, entering the country on a travel visa, or emigrating (WHO, 1994).

Research and Policy Breakthroughs

Meanwhile, research scientists were gaining ground. The course of infection was better understood, and the clinical definition of HIV and AIDS was refined. Other drugs went into trial, with mixed success. A drug known as ACTG 076 showed particular promise in mother-to-infant transmissions, and a drug called Saquinavir was approved by the FDA in record time. Viramune followed these, further expanding treatment options for HIV-positive patients. Combination therapy approaches developed in 1996 were especially effective, and by 1997 a global standard of care had been adopted.

Public policy during this period took a brave step socially. The condom, rarely ever spoken of in polite company and used even less, became less taboo and more widely used than ever before. Condom sales took off in developed countries, quadrupling in some areas. This was due to the efforts of the CDC; similar campaigns in the UK and Europe sought to slow the spread of AIDS by promoting safe sex. President Clinton's administration aggressively advocated for HIV/AIDS education and funneled more federal resources toward AIDS research. Internationally, the WHO AIDS program was replaced by the UNAIDS Global Programme that is still in existence today (WHO/UNAIDS, 2006).

Where We Are Now: 2000-Today

Since 2000, additional factors have begun contribute to the the global spread of HIV. Heroin addiction in Asia has been on the rise, which brought with it dirty needles and the risk of new

infections. India suffered with over 2 million diagnoses alone, in spite of the government's refusal to admit the epidemic had adversely affected the nation.

The WHO released its comprehensive report examining HIV and AIDS in all of its 25-year history in 2010. This report had good news for developed nations: by 2008, the U.S. domestic HIV infection rate was considered effectively stable, and has remained so to this day. The report also demonstrated that while insistent public awareness campaigns about safe sex and other methods of transmission had slowed the rate of HIV infection in developed countries, there was much to be done elsewhere.

Global Education and Aid Efforts

Under President Bush, the U.S. committed funds to help African countries, but the funds were mismanaged and the spread of HIV continued unabated (Fleck F. WHO, 2003). Of the 4.1 million cases in sub-Saharan Africa then, only 1% received the available drugs (WHO/UNAIDS, 2006). This led to the WHO's declaration of the failure to treat the 6 million AIDS patients living in developing nations as a global public health emergency.

In 2003, the WHO announced its '3 by 5 Plan,' wherein 3 million people living in undeveloped countries would gain access to treatment by 2005 (WHO/UNAIDS, 2006). Financial problems plagued the initiative. Ultimately, private philanthropists and the U.S. government funded the delivery of crucial antiretroviral medication to 15 African countries. The 3 by 5 Plan was unsuccessful, but it did drive a renewed push by the WHO to deliver care to sub-Saharan Africans by 2010 (WHO/UNAIDS, 2006).

Several countries were unable to properly manage funds given to them. Other governments refused aid packages that came with certain use stipulations that they found offensive or immoral. For example, Brazil took issue with the U.S.'s refusal to condemn the role of sex workers in HIV infection, turning down $40 million in aid.

HIV Denialism Disrupts Aid

What had begun as a crisis within the medical community had taken on decided political overtones by the mid-2000s. Members of the UN and individual governments operated multiple initiatives; sometimes entire continents were targeted, and sometimes local government strove to reduce infection rates on home turf.

Unsurprisingly, political disagreements affected the flow of cash, often stalling or outright preventing certain populations from receiving treatment or information about HIV. Several governments bowed to stigma and failed to address rampant HIV infection at all. In South Africa, President Thabo Mbeki continued to ignore the advice of scientific authorities to increase access and availability to antiretrovirals in his country. Mbeki's Presidential AIDS Panel claimed the link between HIV and AIDS was not well enough established and that the toxicity and efficacy of HIV treatments needed more study, catastrophically blocking the use of common treatments like AZT throughout South Africa.

By the time Mbeki was recalled from the presidency in 2008 and one year before the FDA approved its 100th HIV/AIDs drug, an estimated 16.9% of South Africans aged 15-49 were HIV positive (UNAIDS, 2015).

One notable exception to denialism among African national governments was Uganda. Aggressive public awareness efforts educated Ugandans about safe sex and safer drug use, and as a result, the rate of HIV infections was halved over a ten-year period. This success allowed African nations to overcome the societal taboos that prevented frank discussions about safe sex. Globally, public awareness was at its highest since the AIDS crisis had begun, but this awareness had yet to reach sub-Saharan African countries.

EPIDEMIOLOGY AND PREVALENCE OF HIV AIDS

- HIV continues to be a major global public health issue, having claimed 36.3 million [27.2–47.8 million] lives so far (UNAIDS, 2015).
- There is no cure for HIV infection. However, with increasing access to effective HIV prevention, diagnosis, treatment and care, including for opportunistic infections, HIV infection has become a manageable chronic health condition, enabling people living with HIV to lead long and healthy lives.
- There were an estimated 37.7 million [30.2–45.1 million] people living with HIV at the end of 2020, over two thirds of whom (25.4 million) are in the WHO African Region.
- In 2020, 680 000 [480 000–1.0 million] people died from HIV-related causes and 1.5 million [1.0–2.0 million] people acquired HIV.
- To reach the new proposed global targets set by UNAIDS, we will need to redouble our efforts to avoid the worst-case scenario of a half million excess HIV-related deaths in

sub-Saharan Africa, increasing HIV infections due to HIV service disruptions during COVID-19, and the slowing public health response to HIV (UNAIDS, 2015).

THERAPEUTIC NETWORKS FOR HIV AIDS

GLOBAL CONTEXT

The key to fighting AIDS is stopping the rapid replication of the HIV virus within a patient's T-cells, allowing an infected host to maintain a functioning immune system. A combination of three very powerful drugs, taken exactly as prescribed every day, effectively stops HIV from infecting new cells. While this isn't a cure, it means HIV-positive individuals can live a long and healthy life as long as they adhere to the treatment regimen. It's important to note that strict adherence is vital; missing even a handful of doses can allow HIV to begin replicating (Gill, 2005).

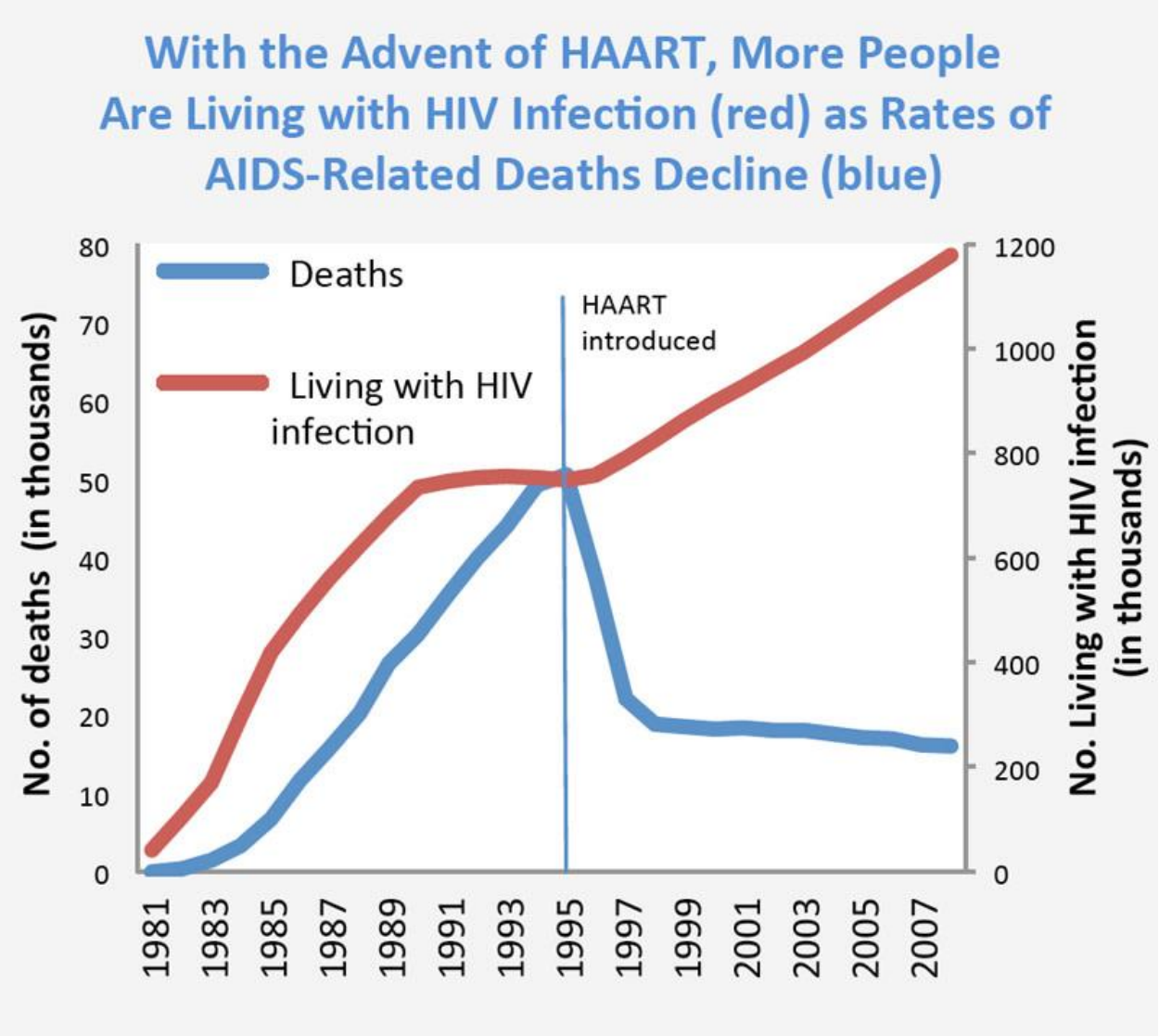


Image via the National Institute on Drug Abuse. While the number of HIV infections continues to climb, the development of highly active antiretroviral therapy (HAART) has significantly reduced the rate of AIDS-related deaths in the United States.

The first generation of AIDS drugs had some severe side effects; in fact, so much so that some patients were reluctant to start treatment. Today, side effects are significantly more tolerable and last only a few weeks in most cases. Typical short-term side effects include diarrhea, nausea and headache. Over the long term, some patients experience increases in blood sugar or changes in kidney function or bone density.

For anyone undergoing HIV treatment today, it is crucial to take the medications exactly as instructed, down to the hour of the day and to continue monitored checkups. Regular measurement of the viral load in the bloodstream can assure medical staff that the HIV virus has not begun to replicate into AIDS — the collection of potentially fatal illnesses and cancers that cannot be fought by an HIV patient's compromised immune system.

Inching Towards a Cure

The ever-elusive cure for AIDS may be within reach. Of course, as with any scientific research there are steps forwards and backwards in this quest. For instance, the global health community celebrated in 2009, when an HIV patient named Timothy Brown was reportedly cured of HIV after receiving a bone marrow transplant from a donor whose cells possessed a mutation for HIV resistance (Brown, 2015).

The success of this triumph has since been challenged by test that find HIV has returned to Brown's cells. To compound disappointment, two doctors in Boston used the bone marrow transplant method to cure two AIDS patients, but the results were also temporary. HIV returned in the newly transplanted cells of both patients.

More recently, a baby who contracted HIV from her mother *in utero* was treated with antiretroviral for most of her first year of life. Her parents discontinued her treatment and to date she is still healthy. Likewise, another HIV-positive newborn in Mississippi was treated at birth and remains disease-free, though scientists are unclear on exactly why. While the jury is still out on bone marrow transplants, treatment within hours of birth and other methods, the idea of a cure seems more realistic than ever.

In perhaps the most exciting announcement yet in the fight against AIDS, UNAIDS claims that by 2015 scientists will reach a crucial tipping point. Current estimates point to the number of HIV-positive patients in treatment exceeding the number of new infections. Throughout its history, the number of new infections has always far outstripped the number of patients in treatment. In light of this new data from UNAIDS (UNAIDS, 2015), it looks like scientists may finally take the lead in the battle against the global AIDS epidemic.

AFRICAN CONTEXT

In most of Africa, public opinion was backed by the leadership of African politicians who refused to acknowledge the existence of sex between men, let alone a health crisis that affected a nation's homosexual population. In many countries, homosexuality was and still is a criminal act; it was not uncommon for early AIDS activists to end up in jails. In countries where the gay social network operated underground, reaching the population with lifesaving education and antiretrovirals was near impossible.

Furthermore, in African nations, public policy was focused on treatment options, versus the needle exchange programs and safe sex awareness campaigns found in other parts of the world. Unfortunately, a lack of trained healthcare professionals made it difficult to administer the medications that might have slowed the rate of HIV infection in these countries.

By 2003, AIDS would overtake swaths of the African continent; nearly 40 percent of Botswana's adult population was infected, with similar percentages in Swaziland. The outlook was especially grim for the children of HIV-positive adults. The U.S. Agency for International Development (USAID, 2005) estimated_that by 2010, 40 million children in developing African nations would have lost one or both parents to AIDS.

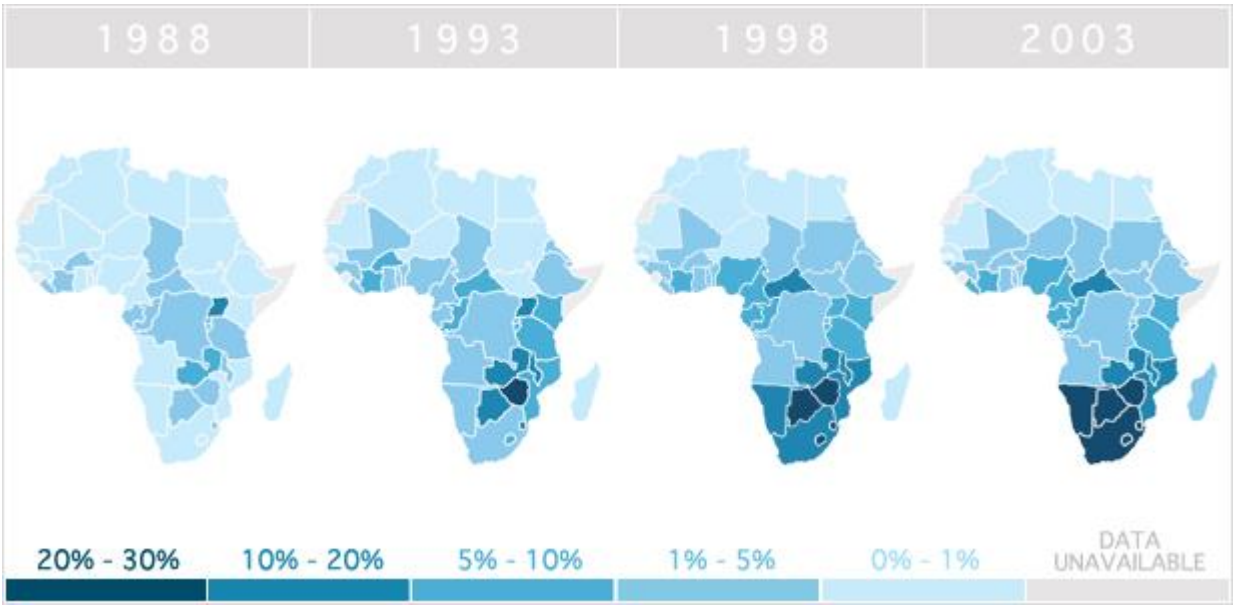


Image via Avert.org. Insufficient responses to early outbreaks of HIV/AIDS in African countries caused infection rates to skyrocket in the 1990s. Even today, over 97 percent of the world's HIV-infected population lives in Africa.

While HIV and AIDS had been noted in sexually active heterosexual groups in central African countries from the earliest days of the epidemic, popular opinion that HIV was largely contained to gay communities endured well into the 2000s (UNAIDS, 2005). This line of thinking had stalled education and prevention efforts in the U.S. and abroad. But as HIV gained a footing in new population groups, global leaders made historic if not overdue efforts to stop its spread in developing nations.

Peltzer in 2008 concluded that traditional medicine use has been common among individuals with moderate and advanced HIV disease (Peltzer, 2008). The aim of their cross-sectional study was to assess the use of Traditional Complementary and Alternative Medicine (TCAM) for HIV patients prior to initiating antiretroviral therapy in three public hospitals in KwaZulu-Natal, South Africa. Using systematic sampling, 618 HIV-positive patients were selected from outpatient departments from three hospitals and interviewed with a questionnaire.

TCAM was commonly used for HIV in the past six months by study participants (317, 51.3%) and herbal therapies alone (183, 29.6%). The use of micronutrients (42.9%) was excluded from TCAM since mostly vitamins were provided by the health facility. Herbal therapies were the most expensive, costing on average 128 Rand (US$16) per patient per month. Most participants (90%) indicated that their health care provider was not aware that they were taking herbal

therapies for HIV (90%). Herbal therapies were mainly used for pain relief (87.1%) and spiritual practices or prayer for stress relief (77.6%). Multivariate logistic regression with use of herbs for HIV as the dependent variable identified being on a disability grant and fewer clinic visits to be associated with use of herbs, and TCAM use for HIV identified being on a disability grant, number of HIV symptoms and family members not contributing to main source of household income to be associated with TCAM use.

It was concluded that traditional herbal therapies and TCAM are commonly used by HIV treatment naïve outpatients of public health facilities in South Africa. Health care providers should routinely screen patients on TCAM use when initiating ART and also during follow-up and monitoring keeping in mind that these patients may not fully disclose other therapies (Peltzer, 2008).

Another study in South Africa (Maroyi, A., 2014) seek to document the utilization of traditional medicines in managing human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) opportunistic infections in sub-Saharan Africa. This study was based on a review of literature published in scientific journals, books, reports from national, regional and international organizations, theses and conference papers obtained from libraries and electronic search of Google Scholar, ISI Web of Science, MEDLINE, Pubmed, Scopus and Science Direct. A total of 79 medical conditions related to HIV/AIDS were treated using 74 plant species (Maroyi, A., 2014). The common diseases treated by herbal remedies were bacterial/fungal infections, boosting of appetite/immunity, cold/cough, cryptococcal meningitis, diarrhea, fever, herpes simplex/zoster, oral/oesopharyngeal candidiasis, skin infections/rash, tuberculosis and wounds. More than threequarters of the documented plant species (63 species, 85.1 %) have anti-HIV active compounds. This study revealed that traditional medicines are often used as alternative sources of medicines for HIV/AIDS opportunistic infections in sub-Saharan Africa (Maroyi, A., 2014). Further investigations are needed to explore the bioactive compounds of these herbal medicines, aimed at exploring the bioactive compounds that can be developed into anti-HIV drugs.

CAMEROONIAN CONTEXT

In addition to getting mainstream medical care, many people used complementary treatments to improve their overall health or to help with specific health problems. Complementary therapies can include physical therapies (such as yoga and acupuncture), relaxation techniques (such as meditation), and herbal medicines (Noumi, 2011).

The aim of their study was to evaluate the treatment of HIV/AIDS with locally available medicinal plants and its opportunistic infections, mainly skin diseases, in the population of Mezam Division, North West Cameroon.

Information was gathered from 3 target groups: patients registered in the regional hospital of Bamenda; patients encountered during fieldwork; and traditional healers.

The prevalence of HIV/AIDS is real in the Mezam Division and girls and women are relatively more infected. Out of thirty-five former and new patients interviewed, 8.5% used only anti-retroviral drugs (ARV) and 20% used both conventional and traditional medicines. Forty-one plant species belonging to 39 genera and 23 families were collected. They form 29 therapeutic preparations used to treat the pandemic. Ten patients were ‘’treated’’, i.e., they were symptom-free in this awareness-based medicine. Traditional healers used preparations made of *Aloe barteri, Artemisia annua, Citrus aurantiifolia, Moringa oleifera and Vernonia guinneensis*. Opportunistic skin infections such as herpes zoster, kaposi’s sarcoma and ringworm were easily treated by *Aloe barteri, Leea guineensis, Pteleopsis hylodendron* and *Zehneria scabra*. Chemistry and pharmacology confirm the virtues of these plants, as they produce flavonoids, antioxidants and antifungals (Noumi, 2011).

The traditional healers of the Mezam Division overcome non-complicated HIV/AIDS-related disorders. The chemical composition of plant species used in the combined therapy principle shows some efficiency of the therapeutic preparations used traditional Medicines for HIV/AIDS and Opportunistic Infections in North-West Cameroon: Case of Skin Infections (Noumi, 2011).

Human Immunodeficiency Virus responsible for the Acquired Immuno-Deficiency Syndrome (AIDS) is one of the dreaded diseases of the century. Till date no medicine is available for the prevention and treatment of the disease. Researches are being done throughout the globe. Some efforts are also being made to find drug from plant sources based on ethnomedicine. Attempt has been made to record plants/recipes used as ethnomedicine at Tokombere, Far North Cameroon for the treatment of HIV/AIDS (Noumi, 2010).

People living with HIV (PLHIV) in Cameroon often seek care from traditional health practitioners (THPs) and use medicinal plants (MP) (Noumi et al., 2010, Noumi, 2011). Most MP, however, still lacks evidence for their efficacy and safety, and their use, often undisclosed to referring physicians, may interfere with standard therapies. Therefore, we conducted a

survey of 247 PLHIV in Dschang to assess the determinants, prevalence and trend of MP use. Besides, we surveyed 16 THPs about the use of MP in PLHIV and HIV-related knowledge. 54.9% PLHIV declared using in total 70 plants, 91.3% users were satisfied with MP, and unwanted effects were reported in 2 cases. MP users were less educated than nonusers, had longer disease duration and were more often unemployed. Only 3 THPs used MP in PLHIV, and most of them had insufficient knowledge of HIV. Results may be useful for education on HIV and integration of traditional medicines with conventional therapeutics.

The use of ethnomedicines to manage HIV/AIDS has recently gained public interest, although harmonization with official HIV/AIDS policy remains a contentious issue in many countries (Chinsembu, 2009). Plants and other natural products present a large repertoire from which to isolate novel anti-HIV active compounds. In this literature survey, 55 plant families containing 95 plant species, and other natural products, were found to contain anti-HIV active compounds that included diterpenes, triterpenes, biflavonoids, coumarins, caffeic acid tetramers, hypericin, gallotannins, galloylquinic acids, curcumins, michellamines, and limonoids. These active compounds inhibited various steps in the HIV life cycle (Chinsembu, 2009). However, further studies are needed to determine their interactions with current regimes of antiretroviral drugs. More clinical trials of candidate drugs developed from these novel compounds are also encouraged.

THERAPEUTIC PLURIALISM

Medical pluralism, or concurrent utilization of multiple therapeutic modalities, is common in various international contexts, and has been characterized as a factor contributing to poor health outcomes in low-resource settings. Traditional healers are ubiquitous providers in most regions, including the study site of southeastern Africa. It is not well understood why patients in pluralistic settings continue to engage with both therapeutic healthcare modalities, rather than simply selecting one or the other. The goal of this study was to identify factors that motivate pluralistic healthcare utilization, and create a general, conceptual framework of pluralistic health behavior (Moshabela, 2016).

They identified three broad categories relevant to healthcare utilization among study participants: 1) Traditional healers treat patients with “care”.

2) Biomedicine uses “modern” technologies.

3) Peer “testimony” influences healthcare engagement.

These categories describe variables at the healthcare provider, healthcare system, and peer levels that interrelate to motivate individual engagement in pluralistic health resources.

ADHERENCE VS NON-ADHERENCE TO THERAPEUTIC CHOICES

Adherence to antiretroviral therapy is a principal predictor for the success of human immunodeficiency virus (HIV) treatment. It remains as a challenge to acquired immunodeficiency syndrome (AIDS) treatment and care with the widespread of the associated risks. Adherence to the highly active antiretroviral therapy (HAART) regimen appears to be the single most important variable that predicts a patient's ability to achieve and maintain suppression of HIV viremia to below the level of detection, and is thus critical for success of HAART (Hallet, 2011).

Achieving 100% adherence for all the patients on ART is a great challenge. Long counseling gaps, wrong perception towards ART, presence of depression, and nonsatisfaction with health services were found to be barriers to adherence.

Timely detection of nonadherence behavior and appropriate monitoring of patients, difficulties with ART could potentially help patients to maintain adherence, and therefore improve the treatment outcomes. Adherence is a process, not a single event, and adherence support must, therefore, be integrated into regular clinical follow-up. Investigation of factors associated with long-term adherence would require longer follow-up than the present study. In order to maximize the benefits of ART, patients should be educated on the need of adhering to the right dose at the right time as an intervention against barriers to adherence. Utilization of multiple measures of adherence to be incorporated in the care plans and multiple target interventions focus to resolve the barriers to adherence should be implemented based on barriers present.

CAUSES OF NON-ADHERENCE

Whether caused by negative beliefs, issues with cost, or simply forgetting to take the medication, nonadherence affects more than just a small group of people-in fact, some research estimates that up to 50% of patients are medication nonadherent.

As per research studies in developing countries, there are multiple factors that influence adherence to ART and categorized as: Patient and family/care giver-related factors,

medication-related factors, healthcare delivery system-related factors, and social/environmental factors.

The causes of poor adherence in HIV treatment are extremely varied (O'Laughlin, 2018) including patient challenges related to age, health literacy, psychosocial and neurocognitive issues, and substance abuse, among other factors. Adherence is also impacted by medication-related barriers, such as complexity of regimens and treatment side effects; and healthcare system challenges, such as drug costs and coverage issues, can also reduce the likelihood of a patient taking his or her medications as appropriate. The purpose of this article is to review the nature and impact of several key adherence-related factors in HIV.

ADHERENCE AND CRISIS /CONFLICT

Refugees described profound motivation to adhere to ART and employed adherence strategies to facilitate success despite the austere setting. However, refugees spoke of specific hardships living in Nakivale that served as barriers to ART adherence, including difficulty accessing clinic when ill, food insecurity, drug stockouts, and violence and unrest in the settlement. For some refugees, need for ART inextricably linked them to the HIV clinic and prevented them from transitioning permanently away from the settlement (O'Laughlin, 2018).

- People affected by humanitarian emergencies and armed conflict are often at increased risk of HIV – though these crises do not always translate into an increase in infections. Refugees and displaced people are not usually included in national HIV strategies meaning prevention and treatment services may not reach them.

- Humanitarian emergencies and armed conflict exacerbate existing vulnerabilities and inequalities increasing the risk of HIV for key affected populations.

- People living with, and affected by, HIV and AIDS are particularly vulnerable to the effects of instability associated with humanitarian emergencies and armed conflict.

- HIV interventions should be included in planning for emergency to ensure that the growing number of people living with HIV and affected by humanitarian emergencies can access treatment and that prevention services are in place.

Humanitarian emergencies and conflict disrupt normal social and economic structures and activities and often involve mass displacement. The breakdown of social cohesion, lack of

income, shortage of food, sexual violence, increased drug use and the disruption of health, education and infrastructure that characterize complex emergencies all contribute to putting populations affected by these crises at greater risk of HIV and present challenges for those already living with the virus.

Moreover, populations most at risk of HIV in times of stability (such as women, sex workers and men who have sex with men) may become more vulnerable during humanitarian crises as existing forces of marginalization intensify and their needs are deprioritized.

Health systems are also put under strain in emergencies and during outbreaks of conflict. This can hamper the treatment and prevention of HIV. Healthcare staff may find it harder to do their jobs and access facilities – this could be due to a range of factors including safety, access to facilities and non-payment of wages. Similarly, patients may not be able to access healthcare facilities. Emergencies can also cause problems with the supply of medication, including antiretroviral drugs, and prevention items such as condoms and testing kits (UNAIDS, 2015).

However, the challenges presented by emergencies do not always translate into increased infections. The spread of HIV during crises is always context-specific. Conflicting factors such as reduced mobility and access to an area, and in the case of some refugee camps improved protection, health, education and social services, may contribute to a decreased spread of HIV (UNAIDS, 2015). This suggests that HIV vulnerability and risk can be managed and mitigated in some contexts during emergencies. Overcoming barriers to treatment, targeted prevention services and the protection of rights are key in this. Mitigation is not always possible and will depend on factors such as existing infrastructure and how long an emergency or conflict continues.

It should also be recognized that in some cases the end of conflict may also bring the risk of increased infections as areas open up, people return, and transport and travel to the area increase. Increased focus on HIV prevention may be particularly important at this time.

In 2005, Medicins Sans Frontieres (MSF) began an HIV treatment programme in the Pool region of the Democratic Republic of Congo, an area heavily affect by violent unrest, focusing on ensuring continuity of antiretroviral treatment, the programme centered on provider-initiated testing and counselling for high-risk patients or patients with possible medical

indicators of HIV at all MSF facilities (not just HIV clinics), and on the integration of HIV care and treatment with other MSF activities (UNAIDS, 2015).

MSF implemented similar programmes in a total of 12 countries. Data collected in these programmes show patient outcomes in these post-conflict regions were comparable to those in other more stable but resource-limited settings.

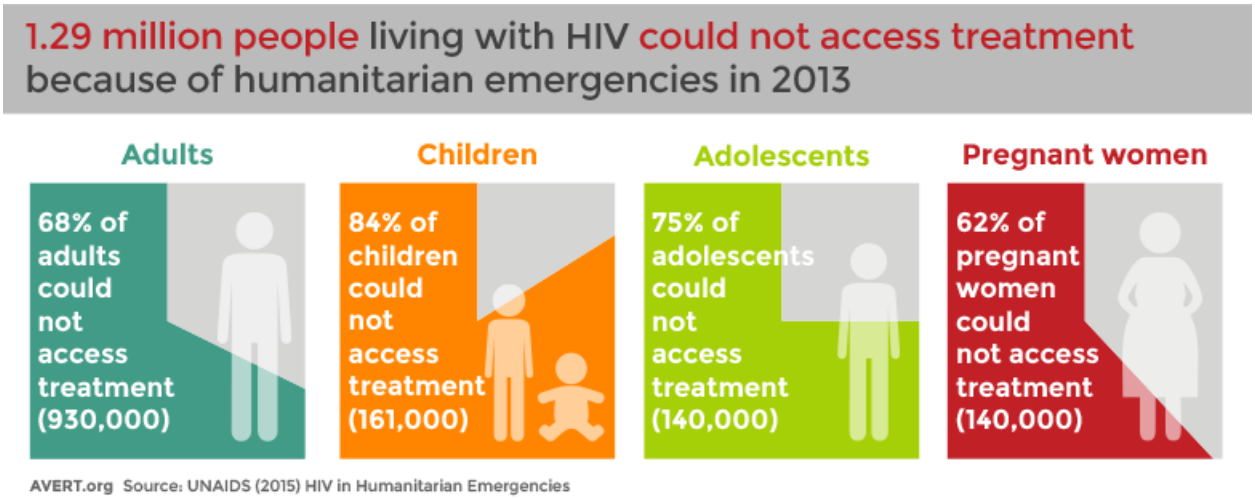
MSF's recommendations for ensuring these programmes succeed include contingency planning for both staff and patients, focusing on patient adherence through education and motivation, establishing secure emergency stocks of medication, and educating patients on strategies for managing forced treatment interruptions

The impacts of emergencies and conflict on people living with HIV

People living with and affected by HIV and AIDS are particularly vulnerable to the effects of instability associated with humanitarian emergencies and prolonged crises. Unfortunately, a huge number of people living with HIV are affected by crises every year.

In 2013, one in every 22 people living with HIV was affected by humanitarian emergencies (a total of 1.6 million people). The vast majority of these people (1.3 million/81%) were in sub-Saharan Africa (Marita, 2013).

Humanitarian emergencies and prolonged crises make accessing HIV treatment more difficult. This is particularly the case when large numbers of people become displaced and social infrastructure is disrupted. In 2013, more than one million people living with HIV were estimated to have been unable to access ART due to humanitarian emergencies (Marita, 2013). People living with HIV who are unable to access treatment face an increased risk of opportunistic infections and developing AIDS-defining illnesses. Treatment interruption may also lead to complications such as drug resistance (Marita, 2013).



Lack of access to healthcare also poses the problem of patients going unmonitored. This means they may end up taking the wrong treatment or not starting treatment when they need to (UNSAIDS, 2015).

The way forward: Including HIV in humanitarian responses

In the past, HIV interventions were not included in humanitarian responses as they were considered to be addressing a developmental issue. In 2003, the Inter-Agency Standing Committee (IASC) published the first comprehensive guidelines for addressing HIV in humanitarian settings to help those involved in emergency response to deliver HIV prevention, care and support to people affected by humanitarian crisis.

Since then, there has been a growing awareness that HIV interventions must be multi-sectoral, begin at the onset of a conflict or emergency, and be continued through every stage. However, the reality on the ground has often fallen short of aspirations. In many humanitarian settings there remain substantial gaps in the provision of HIV services.

Sexual health, including HIV prevention and treatment services, has not been prioritised in humanitarian responses despite being included in the SPHERE handbook which sets out minimum standards for humanitarian response. This means that a significant number of people living with HIV and affected by emergencies continue to lack access to treatment, yet more are put at risk of contracting HIV as they lack access to prevention services (Paul, 2004).

UNAIDS emphasises that stronger integration of HIV treatment and prevention into emergency planning (at national, international and organisational levels) is crucial to ensure HIV services can continue in humanitarian contexts. This should include (UNAIDS, 2005):

- Determining roles and responsibilities of key actors prior to any emergency
- Decentralising stocks of medication and prevention supplies, such as condoms and testing kits, so that they are dispersed between a number of facilities
- Improving HIV-related data management including patient follow-up plans with a unique identification number for each patient
- Using tools such as health travel cards with details of treatment to help ensure treatment is not interrupted if patients are forced to move
- Providing longer-term prescriptions
- Ensuring that HIV services are available in camps for people who have been displaced
- Providing rapid tests
- Ensuring safe blood transfusions.

However, the provision of HIV services during crises is clearly still not meeting the needs of the people affected. This remains a major hurdle in the global fight against HIV and AIDS.

2.10. SYNTHESIS OF THE REVIEW

A plethora on the domain of HIV/AIDS was explored. The literature that is reviewed in this chapter is both thematic and chronological. The history and origin of the disease HIV was examined alongside its epidemiology and prevalence. The review looked at the different debates on the origin of HIV. This mentioned how it appeared firstly in many continents and specifically Africa and Cameroon.

There exist great volumes of literature on HIV/AIDS. However, for reasons of being specific the most relevant literature was selected. The availability of much literature is affirmative oof the severity of the pandemic HIV/AIDS. Most of the literature is however quantitative about 70%, but still provided us with enough information to carry out our research. Most approaches and methods were biomedical focusing only on the disease without a closer look at the human as well as cultural aspects of these different individuals. Different therapeutic networks were examined in this chapter and it was discovered that very little development has been done on ethnomedicine. Focus was mainly on treatment with the use of ARTs. It was also realized that lots of controversies existed between whether conflicts increase the incidence of HIV or not. The utilization of other therapeutic networks for the treatment of HIV has to still be researched

on since it varies from community to community. Interaction between different therapeutic choices also needs to be revisited since a study carried out in the North West region of Cameroon showed that more than half of patients exhibited the phenomenon of medical pluralism. The cultural aspects of HIV were also handled with its diverse perception in different communities amidst stigmatization and acceptance of treatment. Adherence to therapies was handled alongside nonadherence to treatment with their causes and effects. The adherence of patients to their choices of treatment was reviewed but it was found out that only ARTs were being examined with need for research on other therapeutic options especially during crises and emergencies which gives relevance to our study exploring other therapeutic options that are lost as a result of conflicts. The theoretical framework used to place our work into context and comprehensively interpret findings consists of two selected theories namely ethnomethodology and cultural dynamism.

2.11 THEORETICAL FRAMEWORK

Every intellectual has a theoretical approach used in making phenomena intelligible. Without a theory it is difficult to apprehend the meaning attached to phenomena. Consequently, the discipline of anthropology has number theories from classical to contemporary theories. We have used a number of theories that have helped us interpret our data.

2.11.1. Justification of the choice of Theory.

This theoretical framework served as a lens through which we evaluated and addressed our research problem and questions, and interpret our findings. To this effect, we decided to explore three main theories notable Critical medical anthropology (CMA) theory, Ethnomethodology, and Resilience theories. Ethnomethodology helps us explore and understand the underlying perspective or methods in therapeutic adherence in Bamenda from the participant point of view. It enables us to know their perception about adherence as well as decipher the methods used in treating the disease during the crisis situation. The resilience theory permitted us to interpret the mechanisms of adaptation to the rather dynamic perspectives of therapeutic adherence during the crisis that has led to the changing of lifestyles in these patients. It helps us to understand HIV treatment patterns and management, as well as the preventive measures. Lastly, the Critical medical anthropology (CMA) theory was just the right medium for understanding and describing phenomena their origins of dominant cultural constructions in health, including which social class, gender, or ethnic group interests particular health concepts express and under what set of historic conditions they arise.

2.11.2 Critical medical anthropology (CMA) Theory

Critical medical anthropology is a "theoretical perspective in medical anthropology which stresses the importance of political and economic structures, especially global capitalism, on the health of human populations (also known as the political economy of health)" (Joralemon, 2010).

Consequently, what came to be called critical medical anthropology focused attention on understanding the origins of dominant cultural constructions in health, including which social class, gender, or ethnic group's interests particular health concepts express and under what set of historic conditions they arise.

These critical theories can provide new ways of thinking about professional roles, medical decisions, disease diagnosis and etiology, treatment adherence, prevention messaging, and all sorts of health-related behaviors and systems of understanding.

Critical medical anthropology (CMA) is a branch of medical anthropology that blends critical theory and ground-level ethnographic approaches in the consideration of the political economy of health, and the effect of social inequality on people's health. It puts emphasis on the structure of social relationships, rather than purely biomedical factors in analyzing health and accounting for its determinants.

CMA starts with the idea that human health is a biosocial and political ecological product. Consequently, CMA is critical of the tendency to naturalize the process of health and illness in the health and social sciences. CMA dates to the 1980s, but has deeper roots in critical theory concerning the social determinants of health. CMA adds an anthropological dimension to traditional critical approaches, thereby avoiding a top-down perspective. In other words, CMA recognizes that there is interaction between the macro-level of social structure, the meso-level of social organization and agentive action, and the micro-level of individual experience and health.

During the early years of medical anthropology’s formation, explanations within the discipline tended to be narrowly focused on explaining health-related beliefs and behaviors at the local level in terms of specific ecological conditions, cultural configurations, or psychological factors. While providing needed insight about the nature and function of traditional and folk medical models, the initial perspectives in medical anthropology tended to ignore the wider causes and determinants of human decision making and behavior. Explanations that are limited

to accounting for health-related issues in terms of the influence of human personalities, culturally constituted motivations and understandings, or even local ecological relationships, emergent critical medical anthropologists began to argue, are inadequate because they tend not to include examination of the structures of social relationship that unite (commonly in an unequal fashion) and influence far-flung individuals, communities, and even whole nations. A critical understanding, by contrast, involves paying close attention to what has been called the "vertical links" that connect the social group of interest to the larger regional, national, and global human society and to the configuration of social relationships that contribute to the patterning of human behavior, belief, attitude, and emotion. Consequently, what came to be called critical medical anthropology focused attention on understanding the origins of dominant cultural constructions in health, including which social class, gender, or ethnic group's interests particular health concepts express and under what set of historic conditions they arise. Further, CMA emphasizes structures of power and inequality in health care systems and the contributions of health ideas and practices in reinforcing inequalities in the wider society. Moreover, CMA addresses the social origins of illness, such as the way in which poverty, discrimination, industrial pollution of the environment, social violence, and fear of violence contribute to poor health. Critical medical anthropologists argue that experience and "agency," that is, individual and group decision making and action, are constructed and reconstructed in the action arena between socially constituted categories of meaning and the political-economic forces that shape the context [and texture] of daily life. In other words, people develop their own individual and collective understandings and responses to illness and to other threats to their well-being, but they do so in a world that is not of their own making, a world in which inequality of access to health care, the media, productive resources (e.g., land, potable water, clean air), and valued social statuses play a significant role in their daily options.

Additionally, while recognizing the fundamental importance of physical (including biological) reality in health, such as the nature of particular pathogens or the release of toxins into the environment, CMA emphasizes the fact that it is not merely the idea of "nature"—the way external reality is conceived and related to by humans—but also the very physical shape of nature, including human biology, that has been deeply influenced by an evolutionary history of social inequality, overt and covert social conflict, and the operation of both physical power and the power to shape dominant ideas and conceptions in society and internationally through processes of globalization, control of production and reproduction, and control of labor.

2.11.3. Ethnomethodology

The theory of Ethno-methods, that is, the methods used by ta given people to understand and attribute possible solutions to their challenges was elaborated in 1952 by Herold Garfinkel. It has a great deal of influence on anthropology because it uses mainly the meaning that individual attribute to a given phenomenon. He was particularly interested in the methods socio- cultural collectivities used in interpreting phenomena. To better understand Ethnomethodology, one can dissect the term into various syllables, notably; "Ethno" which means people, collectivity, group, and nation. "Method" according to Mbonji (2005) is referred to as "the way to be followed by the human spirit to describe or deliver a coherent discourse to get to the truth of the object and to analyze it". Therefore, methods are what a given group of people sharing a common socio-cultural identity uses to understand and produce social order. "Logy or logos" means, the study of, or the science of a given phenomenon. Therefore, ethnomethodology is the method used by people of the same cultural orientation to assign solutions to challenges the persons here are HIV patients struck by the crisis and struggling to assign solutions to their problems or challenges in the unrest. Garfinkel disapproved of Talcott Parsons attempt to make the general theory that explained all societies. In 1954, Garfinkel observed the way some jury members behaved. He paid particular attention to how they used common sense method to determine and establish matters of fact. In a nutshell, ethnomethodology is the study of methods people use for producing knowledge or recognization social order. Furthermore, this theory takes interest in the methods a given people use to create the underlying patterns of social life.

Garfinkel assumed that ethno methodology, is vital in explaining the methods and techniques used by people to establish replicable knowledge used in solving their problems. He posits that every socio Cultural setting has a specific method of producing knowledge. Ethnomethodology facilitates ethnographic studies in producing accounts of people's methods of negotiating their daily challenges. This emphasizes a thick analysis of a given socio-cultural phenomenon from an emic point of view. We use this theory to explore the pattern of knowledge employed by the population of Yaoundé in treating stroke, as well as understand the causes, and preventive methods of stroke.

To better apprehend this theory we went further to exploring some of the principles relevant to our work. They are, the Principle of Reflexivity.

2.11.2.1. Principle of Membership

This principle according to Garfinkel (1987), helps members of a given society to be considered actors and carries of vital and potentials knowledge in various perspectives. Ethnomethodology

is less interested in “individual entities”. It is more interested in collective knowledge, that is, the knowledge that has collective etiology and significance. It believes in the competences involve in being a bonafide member of a collectivity. The notion of ”membership” does not necessarily connote a person. Instead, it could also mean a mastery of collective knowledge or language, which we understand in a particular way. Membership refers to capacities and competencies that people have as members of the society. For example, the capacities to speak in a particular way, know and understand in a given way, and act in ways that are sensible in that collectivity. Relating this principle to our work will help us understand in-depth the various processes of therapeutic adherence used by the hiv patients of Bamenda during the crisis that has struck this region for a long time.

2.11.2.2 Principle of Methods

Garfunkel (1967) states that every ethnic group has its methods used in treating diseases. The methods are equally used to effect good practical actions. They are the daily activities and taboos which have been put in place by the healers, treatment centers and community members to achieve their objectives. They need to share methods and join performances in order to achieve solutions to their problems. Some of these methods could be negotiation outcomes with the other members of the community. The crisis has led to alterations in lifestyles and equally affected access to use all available therapeutic networks. Methods are common trajectories and processes used by members of a cultural setting to negotiate their daily prospective. This is altered in the event of conflict or war. This is the case of these patients who may not adhere or may change therapeutic options as a result of the crisis.

2.11.2.3 Indexicality

It is a principle, which Garfunkel (1967) explains as the way an individual uses a particular word to convey a specific meaning. It refers to the contextual nature of behavior and talk. Talk for example is indexical in that, it conveys no meaning without a context. We can never reach the ideal of pure objectivity in which meanings are made totally explicit and formulated in a wholly context-free way. This principle takes into consideration the sense to which each individual attaches wards, objects, gestures etc. Coulon (1978) states that “there are indexical expressios that cannot be taken out of a given context”. Consequently, to understand better a given phenomenon, it is important to understand the context to which it is tied. This principle helped us to have a vivid apprehension of the meaning individuals assign to a given expression or phenomenon. To decipher therapeutic adherence of HIV patients during crisis in Bamenda to their therapeutic options. We had to understand the context of the object’s explanation. That

is their biography, and their past interactive experience, without which the intrinsic meaning could never be gotten. We had to go back on how they used to obtain and adhere to treatment options before the crisis and during the crisis to better understand the life style changes that have occurred.

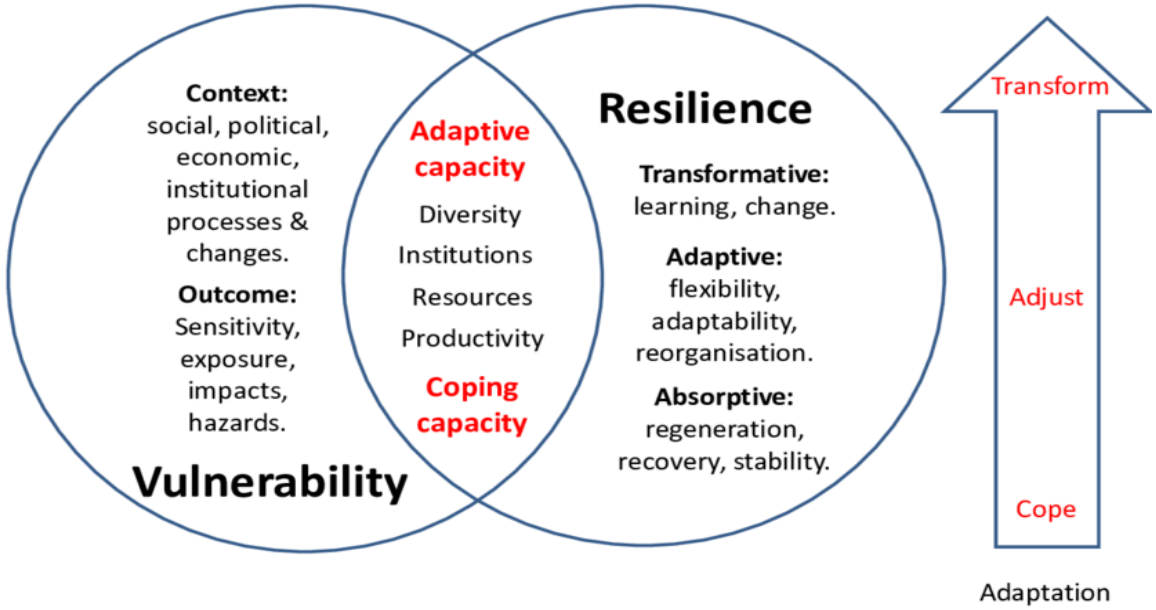
2.11.2.4 Reflexivity

This term refers to observing a phenomenon, which cannot be apprehended otherwise. Garfunkel (1967) posited that the behavior of a person could influence the interpretation of what they observe. This could be in the form of sign, gestures, and action. Reflexivity is the process in which the researcher reflects on themselves to make a more effective and impartial analysis. It involves examining and consciously acknowledging the assumptions and preconditions they bring into the research that shape the outcome. An understanding of the word is based on a person's pattern of thought and behavior, personal values, political orientation, culture, ethnicity, religion, gender and the job we do. When we try to be empathetic within our research it's easy to forget about our own influence of the process it should be noted that when you study a given phenomenon without a pre-conception about it, it becomes difficult to get a vivid sharp image of it. For example, to apprehend therapeutic adherence by HIV patients during crisis, it is important to have a preview of what methods or options your own group or other groups used to treat the diseases in crisis. In so doing, the researcher cannot be baffled by the responses they receive from their subjects.

2.11.3 The Resilience Theory

Resilience theory argues that it's not the nature of adversity that is most important, but how we deal with it. When we face adversity, misfortune, or frustration, resilience helps us bounce back. It helps us survive, recover, and even thrive in the face and wake of misfortune, but that's not all there is to it.

The crisis in Bamenda has affected everyone in that region but each and every one of them has reacted differently. The case is not different for HIV patients and care givers who have reacted differently thereby affecting therapeutic adherence of these patients to their treatment options.



ch Approach

Figure showing how the theory of resilence has led to a change in lifestyle so as to adapt to new situatios.

Coping with stress in a positive way is known as resilience, and it has many health benefits. It's associated with longevity, lower rates of depression, and greater satisfaction with life. n short, resilience theory addresses the strengths that people and systems demonstrate that enable them to rise above adversity (Van Breda, 2001). The emergence of resilience theory is associated with a reduction in emphasis on pathology and. an increase in emphasis on strengths (Rak & Patterson, 1996)

CHAPTER 3

I DEMOGRAPHY AND THERAPEUTIC OPTIONS

3.1.SOCIODEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION

3.1.1.Age and sex distribution in our study population

Of the 80 participants retained, 67% were females and 33% males giving a sex ratio of 2.01. The most represented age group was that of 35-40 (37%). Our findings implied that females were 2 times more affected by the condition than their male counterparts. There have been large scale studies that have quantitatively analyzed the relationship between conflict and HIV/AIDS. Data ceases usually with the start of any conflict, which explains the reason for limited data on this issue. The vulnerability of women and young girls to HIV infection during and after armed conflict is known (Ellman T. 2005). In such situations the women and girls are powerless and cannot negotiate safer sex practices. Their vulnerability is increased due to displacements, discrimination and reduction of basic services and coping mechanisms (Lowicki-zucca, 2005). It was within this backdrop that UN adopted resolutions 1308 and 1325 recognizing the vulnerability to HIV infection of women and young girls in armed and post conflict settings (Gruber J. 2006). The armed conflict in Northern Uganda had been characterized by rape, abductions, and attacks on civilian camps, physical disfigurement and ruthless killings. According to UNAIDS, rape as a weapon has been documented in many areas of conflicts such as Northern Uganda, Democratic Rebublic of Congo (DRC), Liberia, The Rwanda genocide and Bosnia-Herzegovina (UNAIDS, 2004). These armed conflict-related determining factors coupled with the biological vulnerability of women had made them more susceptible to HIV infections and morbidity.

The age group 36 to 37 years represented the highest percentage (38%).

This therefore implied that in the study population, the following trends were obtained : adults aged 36 to 40 years represented higher numbers of persons infected that is 37.5%, 26-35 years had a trend of 25%, 16-25 years had a trend of 18.8%, greater than 40 years had 12.5% and less than 15 years had a trend of 6.3% . Girls were also more vulnerable to the condition due to the numerous challenges listed above and this corroborated with numerous studies around the Globe. The conflict situation has further aggravated the conditions of these persons (PLWHA).

3.1.2.Religious beliefs of participants

In our study population, the most represented religious belief was Christianity (75%). Religion influences HIV prevention, treatment, gender, stigma and therapeutic adherence regarding the condition. It was only in the late 1990s that religious organizations started to be seen as partners

in the fight against HIV/AIDS in an African continent notorious for its poor public health delivery, especially in armed conflicts situations (Olivier, 2011). Religion, in other words, should not be seen as an ally, reliable or not, in the (biomedical) fight against HIV/AIDS but as a practice which shapes the manner in which people conduct their lives in the context of HIV/AIDS (Prince et al., 2009). There are also a number of faith-based health institutions in the conflict hit areas, responsible for ARV delivery and treatment of patients with HIV.

In the conflict regions, most patients have resorted to faith based therapies due to the absence of biomedical management in some areas.

3.1.3.Marital status of participants

In our study, persons divorced persons (48%) were most represented while married persons were the least. Therefore there exist a clear link between HIV/AIDS and marital status. These disparities and variations may be explained by the fact that marriage confers buffering and many other advantages that other statuses do not. One major advantage provided by marriage is a stable sexual network (A. Adimora, 2005). It is plausible that single/never married persons and the divorced/separated have a wider sexual network, leading to more sexual partners, which in the turn elevates their risk of acquiring HIV/AIDS and subsequently dying from it (A.S. Klovdahl, 1994). Marriage is also a form of social control, which in effect works to limit the number of sexual partners that a spouse in the union may legally have (A. Adimora, 2005).

3.1.4. THERAPEUTIC OPTIONS AGAINST HIV/AIDS

3.2.Treatment choices

A majority of respondents (75%) affirmed that HIV can effectively be treated using non-conventional methods. Treatment options practiced here against HIV/AIDS included conventional (35%) methods (ARV therapy) and non-conventional methods which consisted of ethnomedical or herbal clinics, traditional herbal centres that provide treatment using herbs and spiritual guidance. There also exist confessional centres run by priests, who use prayers, spiritual materials (rosary, crucifix, olive oil, bible) and incantations to chase ‘evil spirits’ responsible for the virus. Our findings revealed that many people in these areas use alternative treatment methods such as traditional medicines, prayers, food for the treatment and management of HIV/AIDS and its opportunistic diseases despite the increasing availability of antiretroviral therapy. People in sub-Saharan Africa, particularly the poor are still dependent on medicinal plants for the treatment of basic human ailments like backache, cold, cough, diarrhea, fever, headache, skin infections and wounds (Rates SMK., 2001). Therefore,

traditional medicines remain the main source of primary health care available and accessible to all people in sub-Saharan Africa and in conflict affected regions in particular.

The following trend was also observed: Majority of participants (35%) knew three different treatment options for HIV/AIDS, 31.3% knew two choices, 25% knew one and 8.8% knew more than three therapeutic choices.. This aforementioned method included, ART, churches, ethnomedicine, and healers.

Medical pluralism, manifesting across traditional, faith-based and biomedical health-worlds, contributed to the care cascade bottlenecks for PLWH through three pathways of impact. First, access to HIV treatment was delayed through the nature of health-related beliefs, knowledge and patient journeys and more importantly the crisis situation in the region. Second, HIV treatment was interrupted by availability of alternative options, perceived failed treatment and exploitation of PLWH by opportunistic traders and healers. Lastly, the mixing of biomedical healthcare providers and treatment with traditional and faith-based options. These findings corroborated with those from a study Mosa Moshabela et al in South Africa (Moshabela, 2017) who found that PLWH used pluralistic approaches for their condition.

While PLWH chose their first point of contact, be it biomedical, faith-based or traditional, the decision to maintain or change their healthcare source depended on their experience of improvement in health status. When chosen healthcare or treatment failed, PLWH were more likely to switch sources of care, resulting in long patient journeys to HIV treatment and care.

.....People do not make decisions immediately... the crisis has forced us to choose what is available. There are many people who just start immediately with consulting a traditional (healer). After being stuck, they then decide to go and test their health. But many start with the traditional (healers), including me… (Man, aged 38 year, HIV positive).

3.2. 1.1.Treatment options used by patients

Majority of patients interviewed used ARV (n=80) for their treatment. Even though the crisis had hampered the sector greatly. Traditional medicine 50%, prayers 60%, meditation 50%, food suppliments 40%, and others 5%.

The choice of healthcare sources depended largely on general health beliefs, whether PLWH were more inclined towards biomedical, faith-based or traditional sources, as well as more specifically how the conflict has affected their treatment. These health inclinations and explanations influenced patients' preferred source of healthcare, which could have implications for delays in reaching the appropriate form of care and treatment.

...That is normal because we have three ways…we have those who believe that we Christians can be prayed for We pray because getting to the health centers is not always safe. Then we have another category which believes that if they are sick then someone is wishing them bad and they visit a traditional healer. Then the bigger percentage has realized that when they are sick, they must visit a (health) clinic. (Male, 41 years, on ART)

Specific knowledge and understanding of illnesses, services and treatments also influenced the extent to which PLWH engaged in medical pluralism. Knowledge of traditional healing for PLWH was rooted in the notion of 'tradition', and could be perceived as reliable when patients experienced health relief.

However, awareness and knowledge, or lack thereof, of biomedical options as a result of the ongoing crisis, including HIV specific services, had not facilitated access to testing and treatment. Depending on how health knowledge was relied and acted on, PLWH could delay access to biomedical care by first consulting faith-based or traditional healers.

There is a woman who knows traditional medicines… I started taking those medicines… it is our tradition… even a small child would take the medicines… now when I felt like my health had improved and the roads were opened, I told myself like: 'You should go for testing so you may know what is troubling you. (Male, 50 years, on ART and ethnomedicine)

3.2.1.2. More effective options according to patients

According to most respondents (37%), traditional medicine was the most effective in treating HIV and its complications.

The predominant reasons for people to use non-biomedical medicines after they had initiated care and treatment was the difficulty in accessing biomedicine due to constraints brought about by the crisis, persistence of HIV or its symptoms, as declared by PLWH and often expressed failure of biomedical treatment. The persistence or worsening of the illness led some patients to declare failed treatment and adopt alternative explanations such as enchantment, resulting in decisions to seek care elsewhere.

Before the crisis, I have been taking the medicine for HIV, and the HIV is unrelenting. That only implies that this is witchcraft. That is why I kept going to the traditional doctors. (Female, 48 years, PLWH)

However there was recognition that some health providers, particularly traders who privately sold biomedical or traditional medicines, were exploiting the vulnerability of some PLWH for financial gain. There was further recognition that these deceitful practices hindered access to appropriate treatment which could result in poor health outcomes following delays and interruptions.

They visit the private pharmacies to buy some medicine. They also visit the traditional herbalists for help. These herbalists are not honest and in fact they take money from people. Many patients die when they fail to get the right treatment for their disease. (Male, 61 years, on ART)

3.2.2.Biomedical treatment options used.

While effective in halting disease progression and promoting dramatic patient recoveries, ART carried some physical, emotional and economic cost for the recipients (Nixon, Hanass-Hancock, 2011). Patients were subjected to a long-term and techno-scientific model of disease control that involved consuming specific combinations of potentially toxic synthetic drugs in accordance with a strict adherence regime (Skovdal, Campbell 2011). As ART reduces rather than eliminates HIV, the body (and thus the person) is required to coexist with the virus on a long-term basis, transforming a fatal and acute illness into a long-term chronic condition (Nixon *et al*. 2011). To be most effective, ART requires the collection of a range of empirical body function data. These include kidney and liver tests; viral load (the amount of virus in the blood) as well as chest x-rays and pregnancy tests and monitoring for potential co-morbidities such as tuberculosis (TB), meningitis, hepatitis, sexually transmitted infections and HIV levels (MoHCW 2010). In addition, before enrolment in ART the patients are assessed to gauge their attitudes to counselling, disclosure and drug adherence (MoHCW 2010). The biomedical clinic, in theory, therefore offers an integrated care package involving a suite of monitoring technologies operated by a full complement of specially trained doctors, nurses, counsellors, technicians and rehabilitation specialists. However, as the responses of the participants in this study illustrate, this ideal is more aspirational than reality and worsened by the ongoing crisis. A CD4 level between 500 and 1200 is normal but in the absence of ART, as these cells are destroyed by the virus, the immune system is seriously weakened and the body left vulnerable to infection (MoHCW, 2010).

While ART has hugely shaped the profile and impacts of HIV in Bamenda, it is well documented that pharmaceutical interventions have only limited effects if not effectively monitored and partnered with a reasonable standard of living (Farmer, Nizeye, Stulac & Keshavjee 2006; Mhlanga-Gunda 2010). As the participants who were interviewed explained, local socio-economic constraints and political unrest means that patient health monitoring (regular blood counts, professional medical consultations, guaranteed drugs supply, etc.) had been severely compromised and limited. Monitoring also depends on the availability of trained staff to oversee clinical services (Hallett *et al*. 2011). As Noah observed diet is also important for ARV intake, not only to assist with drug ingestion but also for the overall nutrition and well-being of the patient (Gwatirisa & Manderson, 2009). However, one-third of the participants stated that they could not afford an adequate or balanced diet and, moreover, found it difficult to get access to treatment. It was clear that such structural factors can shape biomedical treatment to be seen as just another competing form of HIV treatment and management.

Prior to the crisis, this was the most popular treatment option for persons living with HIV. Access to this option during the crisis had been difficult and patients tend to other sources for treatment. A relatively small proportion of the population got access to these services.

All health workers interviewed used ART therapy to follow their clients. Most justified the fact that the crisis situation in the Region has impeded the initiation of ART therapy and follow-up of their patients in the various settings. This has resulted in a drastic decrease in treatment adherence by the patients.

Prior to this crisis, we had a well-established chain of treatment delivery and follow-up even here in the villages. Patients did not need to travel long distances to towns to get their ART doses. But now roads are being blocked every day, sounds of guns and fear have hindered the safe supply and delivery of these drugs to the rural health centers. This makes access to drugs difficult and patients are forced to move to towns to be supplied (Female health worker, 51 years).

3.2.2.1. Challenges faced by conventional method

In conflicts zones, people with HIV are twice as vulnerable (O'Brian, 2010). The armed conflict in the English speaking regions has caused the collapse and malfunction of health systems in the area leading to a limited supply of essential drugs and personnel for the adequate follow-up of persons with HIV. Our study underlined many obstacles to the ART programs in

the crisis area. These included issues related to health need prioritization, effectiveness, feasibility, safety and ethics. Adherence to conventional treatment was found to be low due to forced displacement and mobility of the population. Destruction of health services has been common in the conflict-torned North West region of Cameroon. The number of health care providers has also reduced due to death, injury or flight. In addition, drug supplies have been plundered and supply routes interrupted preventing the supply of new drugs. All these have contributed to lower HIV treatment adherence in affected persons.

Most of the health care informants agreed that a significant number of health facilities were closed while many which remained open lacked crucial drugs including the ARTs. They cited security, distance, cost of transportation and lack of displacement as some of the factors hindering the adherence to ART in the affected areas.

Usually when the ART are in short supplies and at their initiation stages, patients need to have short and recurrent visits in our health structures and this increases the cost of their transportation and follow-up. This makes some patients to give up and turn to other means of treatments whose efficacy is doubtful (Male health worker, 35 years).

Some essential drugs are not present here in the hospital or they are supplied late and so some patients (clients) have to travel to the towns to get them and as a results it becomes an expensive asset for them to access (Male health worker 42 years).

Despite the incredible need for ART and other HIV related treatments and services, there are serious constraints that limit its provision. Chief among those constraints is a human resources gap, mostly as a result of understaffing. In addition there are problems associated with the logistics supply management chain and with poor monitoring and follow-up of patients. Our findings revealed that these problems have multiplied during this crisis period. Some of these challenges that biomedicine encountered during this crisis included; displaced populations, lack of access to existing infrastructure, inaccessibility and difficulty in providing certain health services, difficulty in displacement, fear, unwillingness of humanitarian workers to work in the conflict affected areas, lack of electricity, food, sanitation. As stated in 2007 UNAIDS Global report, of the 18 countries surveyed, about half reported that they have restrictive policies in place that negatively impact treatment (UNAIDS, 2007).

Instabillity here has increased the dropout rates from ART programs. We see lesser patients as days go by and even those on RDV miss them at times. We understand that it is not easy for

them to travel when roads are blocked or during ghost town days. So to keep monitoring and following up these patients is not really easy (male health provider, 39 years).

These obstacles to providing ART in this crisis situation can be divided into two distinct areas.

- **Constraints due to medical programming.**

Both health infrastructure and human resources (in terms of persons and skills) were limited or absent in some settings. In addition, there was the lack of financial resources available to health service providers in these areas. Reluctance in political will to create and competently coordinate services and service providers.

...Our hospital branches in the villages had been burned down making it difficult for our patients over there to get their drugs. The government has done nothing about this yet (...) (male health care provider, 52 years).

- **Obstacles due to population.**

Population-related issues such as displacements and migration were specific challenges encountered by PLWHA in these areas. Impoverishment, lack of security had interrupted ART programme continuity. The conflict situation has caused the displacements of numerous persons both leading to interruption in treatment.

....Were chased out of our homes one year ago. Now we live here in town with my brother but I bet u my situation here is different. I had to get used to the process of acquiring drugs here before I could continue my treatment. I made four months without taking the drugs because the ones I had got finish (female, 41 years).

These constraints had pushed persons to seek alternative treatment options which are more accessible such as ethnomedicine, churches.

3.2.3.Ethnomedical treatment for HIV/AIDS

While acknowledging that current antiretroviral drugs are vitally important in improving the quality and prolonging the life of HIV/AIDS patients, the drugs still have many disadvantages including resistance, toxicity, limited availability, high cost and lack of any curative effect (Vermani and Garg, 2002). These shortcomings of conventional ART exacerbated by the ongoing crisis has opened new vistas in the use of ethnomedicinal plants and other natural products for the management of HIV/AIDS.

In many countries, the inclusion of anti-HIV ethnomedicines and other natural products in official HIV/AIDS policy is an extremely sensitive and contentious issue (Chinsembu, 2009). It is sensitive because anti-HIV ethnomedicines and other natural products can easily become a scapegoat for denial and inertia to roll-out ART (Chinsembu, 2009). It is also contentious because in various resource-poor settings, government-sponsored ART programmes discourage the use of traditional medicines, fearing that the efficacy of antiretroviral drugs may be inhibited by such natural products, or that their pharmacological interactions could lead to toxicity (Chinsembu, 2009). Reliance on anti-HIV plants and other natural products can also lead to poor adherence to ART (Langlois-Klassen et al., 2007). Thus, many governments still have contradictory attitudes towards the use of anti-HIV plants and other natural products in the management of HIV/AIDS, discouraging them within ART programmes, and supporting them within other initiatives of public health and primary health care (Chinsembu, 2009).

In essence, many HIV-infected persons still use ethnomedicinal plants and other natural products to treat opportunistic infections and offset side-effects from antiretroviral medication especially in conflict areas because they are readily available.

In the case of this crisis, formal biomedical services were also hardly accessible. Thus, whilst the majority of HIV/AIDS patients rely on ART, some still have faith in the use of traditional medicines. Understandably, HIV/AIDS patients were vulnerable in their choice of treatments such that some of them do vacillate from conventional ART programmes to traditional medicines and vice versa depending on where and how the crisis displaces them.

As early as 1989, the World Health Organization (WHO) had already voiced the need to evaluate ethnomedicines and other natural products for the management of HIV/AIDS: “In this context, there is need to evaluate those elements of traditional medicine, particularly medicinal plants and other natural products that might yield effective and affordable therapeutic agents. This will require a systematic approach”, stated a memorandum of the WHO (1989a). Thus, African governments expressed the need for a concerted, systematic and sustained effort at both local and regional levels to support and biochemically validate African traditional medicines (UNAIDS, 2009). To popularize this commitment, the Organization of African Unity (African Union) Heads of State and Government declared the period 2000-2010 as the Decade of African Traditional Medicine.

All these initiatives demonstrate the need to mainstream and institutionalize traditional medicine into the formal health care system.

Sub-Saharan Africa has rich plant biodiversity and a long tradition of medicinal use of plants with over 3,000 species of plants used as medicines (Scott et al., 2004). Several of these plants may contain novel anti-HIV compounds. In the past decade, there has been a sustained bioprospective effort to isolate the active leads from plants and other natural products for preventing transmission of HIV and management of AIDS (Vermani and Garg, 2002). Screening of plants based on ethnopharmacological data increases the potential of finding novel anti-HIV compounds (Farnsworth, 1994). Indigenous knowledge of medicinal plant use also provided leads towards therapeutic concept thereby accelerating drug discovery (Chinsembu, 2009). Thus, it is important to search for novel antiretroviral agents which can be added to or replace the current arsenal of drugs against HIV. Despite the rich African repertoire from which to select medicinal plants, traditional herbal medicines are still not well-researched, and African knowledge of herbal remedies used to manage HIV/AIDS is scanty, impressionistic and not well documented (Kayombo et al., 2007). Africa is also awash with fake AIDS cures (Amon, 2008). HIV/AIDS is a relatively new human disease, with few ethnobotanical treatments, but logical associations of treatments for other likely viral infections (such as hepatitis B) and closely linked disease states or symptoms (wasting, diarrhoea, lymphadenopathy, skin lesions, cough, and genital ulcers) can increase the prospect of finding new plant leads as potential anti-HIV agents (WHO, 1989ab; Cardellina and Boyd, 1995; Lewis and Elvin-Lewis, 1995).

Respondents in our study used a variety of flora-based products like leaves, roots and back of trees in treating their patients. These regimens were usually used to treat complications of AIDS. These findings were in accordance with a study by Emmanuel Noumi et al. in Bamenda (Noumi E., 2011). They enumerated the different traditional and herbal regiments used in treating HIV and AIDS complications in the region. Some healers treated their patients in adjunction with conventional (biomedicine) treatment options while others preferred using only their herbal knowledge. The few herbalists interviewed gave us an insight on the change of treatment regimens of some patients in the region. They enumerated lack of drug access, distance and security as some of the reasons for this drastic change. However some were honest enough to highlight the limitations of their treatment regiments with respect to the ARV therapy in their attempt to limit the progression of the disease.

The crisis had seen an increase in demand for these ethnomedical treatment options.

I usually treat my patients using a combination of herbs and natural substances. It has been so here for years and most patients are relieved. This crisis period have seen the number of patients here increase. I think it has to do with the difficulty in accessing health facilities (Male tradipractitioner, 71 years).

I have been treating HIV patients for years. What I do is I use natural herbs on patients on ARV drugs so as to fight the infection on two fronts. But since some patients cannot get these drugs now because of the crisis, we are forced to use our herbs to help them. It's true that the condition of some degenerate since ARVs help us in choosing the best portions to give them (Male tradipractitioner, 58 years).

Herbal remedies, which aim to boost the immune system and alleviate symptoms, provide an entry point for patients who might otherwise be skeptical of traditional medicine. In addition, participants observed that the community-based and locally resourced healer could offer more accessible and private treatment than the often distant, under-resourced and expensive biomedical clinic. A study (Moshabela, 2016), for example, found that traditional healers provide the majority of care and treatment for HIV patients.

… People sometimes skip the ARVs by going to the traditional healers for treatment, but they are only wasting their time, and since this crisis is making things difficult for us, I only go there for herbs that can boost my immune system … (Man, aged 45*)*

3.2.4.Faith-based Treatment for HIV/AIDS

A variety of religious and spiritual philosophies with different conceptions of healing coexist in Bamenda. Broadly speaking they can be grouped into four categories: traditional religious beliefs and practices that were carried over from the pre-colonial era, mission churches (Catholic and Protestant), African Christian or spirit churches (also known as Apostolics) and Pentecostal ministries. While other faiths and non-believers are present, almost all of the participants identified with one or more of these main belief systems. Serious and prolonged illness with no obvious cause, or ongoing tension and stress in the community, may therefore lead the afflicted to consult a traditional medical practitioner in order to establish communication with the spirit world, identify and remedy the problem (e.g. through traditional medicines, rituals and witchcraft exposure). These healers do not necessarily reject biomedicine but regard their own methods as the best way to deal with the underlying cause of serious illness.

Christianity is also deeply rooted in the region. They had establish schools, churches and hospitals and zones of denominational influence. The mainstream or mission churches still operate clinics and hospitals and play a role in providing rural and HIV-related health services. In comparison to these churches the Pentecostals, with their modernistic individualist-oriented theology, are a more recent and expanding phenomenon. They preach against the 'old ways' in favor of healing through faith, prayer and exorcism. The Apostolic Churches are also opposed to some aspects of traditional culture but endorse others such as polygamy, prophecy and the spiritualization of illness. Apostolic adherents are known for their open air worship, their distinctive white garb and, for some orthodox adherents, a rejection of biomedical care and treatment. Regardless of the different forms that religious beliefs take, they all influence and mold cultural perceptions of HIV on various levels both as an illness (i.e. how the sick are treated therapeutically) and as a personal and behavioral outcome (i.e. morality, sexuality and gender). While the main faith systems had different points of emphasis, their various community rituals and practices (taboos, discriminations, proscriptions, etc.) shaped the ways in which lives are experienced and choices made (e.g. forms of treatment and attitudes to healing).

The crisis situation had seen a surge of demands for faith healing. Some patients resort to Churches and spiritual healers for their condition.

....*Here in church we encourage the formation of social groups where they can discuss their condition, pray together and fight the infection together. We also provide them with holy water and pray for them when they approach us. This though cannot replace the drugs they are given in hospitals but we all know how difficult it is for them to travel to towns for the drugs* (Priest, 64 Years).

....*Patients come here in their numbers requesting for our advice and prayers. The crisis situation have caused an exodus of many but we try to help the ones that are here in the best way that I can* (Pastor 45 years).

3.2.5.Numerous treatment options

Some patients tend to combine the various treatment options so as to get relieve. They underlined various reasons for their choices. A majority of participants (33%), used more than one option because they did not know which one will be effective.

While some of these accounts are referencing events which predate ART in the region, they also indicate willingness to alternate between, or combine, different medical systems. The non-exclusive nature of traditional medicine in the region is illustrated by how some healers framed their discourse ('I can't treat AIDS') and demonstrated a clear disposition for partnership with biomedicine. This duality between traditional medicine and the clinical biomedicine is explored in the following comments:

… Someone who is HIV positive comes at my place… 'Doctor I am suffering from diarrhoea' we can treat that diarrhoea we can stop it with herbs. Someone can come 'I am coughing' we give him herbs to cure that cough but as a traditional practitioner I can't treat AIDS because AIDS … is caused by a virus which kills the white cells … we can control but not kill the virus. (Man aged 54, tradipractitioner)

…a friend of mine... she was in our [AIDS] support group but … since she cannot get to continue the ARVs, she married a pastor in the neighborhood... she believed that she has been healed so she stopped taking the ARVs but after some time she fell ill she died. (Woman aged 46, HIV positive)

… I know a guy who was on ARVs and he went to a prophet and he was told that his Aunt was the one who was causing the sickness and he stopped taking ARVs … He started to be very seriously ill … and he immediately resumed the ARVs. (Woman aged 43, HIV positive)

...There is no traditional healer who can cure this disease. The only place where you can get a good treatment is hospital but what choice do we have... a lot of traditional healers don't come out openly and say that they don't have a cure. Sometimes they will … refer you to the local clinic. (Woman aged 69, HIV positive)

… Some people I know who have thrown away their ARVs but they now have side effects some have difficult skin rash and some they have to go again through the whole process of getting the ARVs again. (Woman aged 35, HIV positive).

I stopped consuming these ARVs for about two years but then I started having problems with my body, I was having migraine headaches and stomach problems then I went to the clinic… and I was enrolled again as I am seeing that ARVs are effective … (Woman, aged 41, HIV positive).

… This herb Moringa which a lot of HIV positive take … I was discouraged from taking the Moringa because it reduces the effectiveness of the [ARV] drug I consume. (Woman aged 41, HIV positive).

…people also they are attending both the hospital … and the traditional medicine and the hospital medicine again. (Man aged 33, HIV positive).

Medical pluralism also contributed to bottlenecks through the practice of combining sources of healthcare and treatment options, often employed for complementary purposes. Traditional or faith-based healing was used to complement biomedical care, as seen among PLWH who believed they were bewitched or cursed, which could lead to interactions of medicines, and providers, although often unknown to them, treating the same PLWH.

....There are some people who take the medicine for AIDS, but they still continue to take the traditional medicine, (as) extra treatment…They go and start using traditional medicine alongside the hospital medicine. (Female, 55 years, HIV positive)

Some biomedical providers of HIV services feared the reality of PLWH combining ART with other forms of non-biomedical care, due to the possibility of unwanted and unknown drug-to-drug interactions. These fears were also a manifestation of mistrust between biomedical providers and their non-biomedical counterparts, although the individual patients were often the ones who interacted with the different sets of providers.

...we were given [my husband before he died] a lot of herbs mixed with the ARVs... when we last visited the clinic, the doctor told us not to mix them again, that it can be dangerous...(Woman aged 34, HIV positive)

The mixing of care options was also presented in a positive light, revealing opportunities for collaborative engagements between providers through referrals. Generally, traditional and faith-based providers referred patients to biomedical services.

Health care providers and PLWH reported an emerging trend of ‘progressive’ healers who were knowledgeable about HIV, and referred their patients for HIV tests before treating them. If tests were positive, they were encouraged to stay on HIV treatment prescribed by their biomedical providers. There was also recognition of a subset of biomedical providers who referred their patients to healers, although informally, following ‘failed’ biomedical treatment or supply constraints. These biomedical practitioners were perceived to understand traditional or faith-based aspects of illness, especially when patients recovered their health after such referrals.

....The (medical) doctor said: "It is better you take her from here and go seek some traditional medicines because here we have not received delivery and its ghost town, the roads are blocked". I took my wife, and we went to see a traditional healer. (Male, 45 years, HIV positive).

CHAPTER 4

PERCEPTIONS OF THERAPEUTIC ADHERENCE TO HIV DURING CRISIS AND EFFECTS ON PATIENTS.

4.1.1. Patients adherence to therapy.

Patients interviewed had either begun their ARV therapies before or during the ongoing crisis in the Region. PLWH reported adhering to their treatment most of the times (44%) but not at every time. 25% all the times, 19% sometimes, 6% when they feel too sick and 6% when possible.

This crisis has affected both the treatment choices and health of patients in the crisis zone and many informants felt that their HIV treatment had been compromised.

We use to have drugs in the small health centers here but now to have them you will need to travel miles to get them. And since most of the times the roads are blocked and ghost towns, getting to the health centers become difficult and we usually miss our doses. Even if u succeed in going there, you will meet long lines of people, so it is very difficult. (Female, 42 years, HIV positive)

During this crisis, my health condition has really deteriorated. This is mainly because i dont get my drugs in time and it is difficult for me to follow the doses (Female, 49 years, HIV positive).

Some informants had resorted to traditional medicine and spiritual guides for their treatment due to the aforementioned constraints.

I cannot pay the huge transport fare to go and get my drugs because my sole source of income is farming and now this crisis have prevented us from producing and selling our crops as before. I go to church and take herbs for my condition, I know God will not abandon me (Male, 60 years).

I go to the hospital in town once every 4 months. I know it is not good but I do not have I choice either because travelling from here in the village to the town is very difficult at this time (Female, 40 years).

4.1.2. Reasons for non-adherence.

PLWH reported a number of barriers keeping them from getting their drugs. The trends were as follows : Insecurity represented 44% of these barriers, transportation 25%, travelling interrupted 13%, stigma 13% and forgetfulness 6%.

There were a number of barriers to treatment that were caused by the ongoing crisis. The barriers that were cited included security, eviction, distance, food insecurity, absence of health facilities and personnel, cost of transportation and lack of displacement.

Insecurity have sometimes caused us to forget drugs in our homes in fear of being caught in the crossfire. And we all know how difficult it is to get these drugs. I travel miles just to get them while others cannot even travel because their roads are blocked. And this increase the cost in transportation (Male, 52 years, HIV positive).

Health workers are usually unavailable and sometimes far from here. Even when you are at the hospitals, the lines are long and it takes time for them to receive you. Other health facilities lack some of the essential drugs due to less supply and difficult delivery so we have to travel to other centers (Female, 48 years, HIV positive).

Most people who are sick leave alone as a result of the displacement of their families and loved ones. They usually miss their doses when they fail to get someone to give them food. This makes it difficult for some of us to adhere to the treatment (Male, 31 years, health worker).

Our home was burnt down in the village so I had to flee with my children to the town. It has not been easy for me to get a service provider where i can have drugs. It is a different system here (female, 53 years, HIV patient).

The taxi and bus fares into the towns is really expensive and buses travel only on particular days. I had to postpone my travel because I could not get a bus so I had to reschedule and try again the next day with uncertainties on what might happen to us on the way (Male, 33 years, HIV patient).

4.1.3. Effects of crisis on the daily activities of patients

94% of respondents were negatively affected by the ongoing crisis according to our findings.

Having already experienced or witnessed torture, abduction or killings, respondents cited insecurity and fear as some of the negative aspects they experienced in the ongoing crisis:

...Insecurity results in loss of drugs or forgetting to pick them in time from your house. If you hear the alarm, you just take off...every day we are on the run, from one bush to the other. And this keeps us from even taking our drugs. (Woman, 43 years, HIV positive)

The poor security situation results in us getting sicker..., running far away from the clinic and forgetting ARVs in the hurry to escape. If we hear the sound of guns, I bet u no one will sleep in his house that day... and with all these, how can we continue to take our medications. And that is how our health keep deteriorating.... so it's either we get killed by bullets or the disease.. (Woman 38 years, HIV positive).

...Before the crisis started, I was following my treatment, but since the crisis started my medications have become irregular. I fell very sick last month and went to Bamenda hospital for checkup and they discovered that my CD4 have become very low. I'm afraid for my life now. (Man, 52 years, HIV positive).

Healthcare infrastructure and, specifically, lack of human resources and drugs were frequently cited as barriers to treatment adherence caused by the crisis:

...Health workers are either very few or not available, and yet you cannot get a drug refill before being seen by a health worker. We have to travel to where they are found to get our treatment or we go to traditional doctors, most of them have even escaped... so yes the crisis has really affected me negatively. (Female 33 years, HIV positive).

Respondents emphasized the role famine and patient dependence on caregivers for food security may have on nonadherence to ART:

The communities following the crisis can only afford one meal a day. We cannot do our normal farming as usual because we fear to be caught by stray bullets....If I have something to eat in the morning, I will eat and take my drugs, if I don't I will allow it, because I cannot take them in an empty stomach. (Male, 47 years, HIV positive).

4.1.4. Adherence of patients to treatment.

As trends which may not be representative, 38% of patients found it very difficult to adhere to their treatment options, 25% at times , 25% do not quite and only 13% always adhered to their treatment . The aforementioned difficulties accounted for their lack of adherence in the area. This has further resulted in the resistance of first line therapies in some individuals and even deaths.

4.1.5. Challenges faced in obtaining Treatment

A number of constraints were noted. Most participants highlighted fear (n=60), ghost towns (n=60), insecurity (n=50), distance (n=50), destruction of medications (n=25) and non-operational health care facilities (n=30) as the barriers for obtaining adequate treatment.

Though most respondents told of their dedication to taking ART, some acknowledged times of extreme hardships when they missed doses. Problems hindering ART adherence included difficulty overcoming the distance to clinic when ill, food insecurity, drug stock-outs and shortages, and violence and unrest in the region.

Distance and access to health facilities.

Most persons often live far from health centers (average of two hours), road blocks and rarely have financial means to hire a bicycle or taxi. Therefore when sick and without energy or strength to walk this distance, some people cannot travel to the clinics. These accounts from interviews illustrate the problem

*..I came from very far, over 70 kilometers from here. Before I come to the hospital I have to plan the money for a journey fare to the clinic....my extra drugs got finished months ago and was still waiting for the roads to be unblocked...all this while I was relying on prayers. (*Male 39 years, on ARV).

...I was very weak and could not manage to move to the clinic and I could not get someone to take me to the clinic, because I had not revealed that I was HIV positive. The clinics now are far because medications are not delivered in the village here again, roads are not passing. (Woman 35 years, on ARV).

Drug stock-outs and shortages

There were times when medication interruptions occurred because of drug stock-outs. One 30-year-old female who was receiving drugs from Bali Health Center described a time when the ART was not delivered, stating,

...Two months elapsed without me getting my drugs from here because the road to Bamenda was blocked and delivery could not get in...I had 2 stay for that long without the drugs... and I had no transport.... (Female 50 years, on ARV)

Violence and unrest

Respondents spoke of the unrest in the Region as the main catalyst causing absence of healthcare personnel and therefore interruptions in ART distribution. A 37-year-old male refugee told.

...The frequent fighting here have made doctors not to come to the clinics again.... they are also afraid for their lives...one (health care personnel)was even killed here last month...we are now forced to search for them in towns, in order to get treatment. Male, 37 years, HIV positive).

...There are some days when there was insecurity here and two persons were shot. It was our day for receiving drugs, but when we came to the clinic, we did not get drugs because all people in charge of the clinic had gone to… (Man 39 years, on ARV).

*....I was kidnapped and kept there for four good days... I could not even take my drugs with me. During this period I could not have my drugs, nor food to eat. I had to resort to God to survive... (*Woman, 43 years, on ARV).

Displacements

The crisis had let to the displacement of thousands of persons including those on ART. Medication interruptions occurred during travel away from home. Respondents told of missing ART doses because of moving to other areas for safety.

...We have been moving from one town or village to another to remain alive. We left our village (Nwa) since last year and we have resided in four different villages ever since... how can I take my medication in this condition... I don't even know where to get them here, because the clinic over there is always closed and they told me that they have not yet been delivered the drugs. (Male, 50 years, HIV positive).

For some, medication interruptions occurred when traveling for social visits. One 49-year-old male stated,

....Recently, I missed for three days because I had taken a visit to my sister and could not carry the drugs with me. (Male, 49 years, on ARV).

These periods of travel are not always planned in advance as they are conditioned by sporadic outbreaks of violence.

...One morning we woke up to the sound of gunshots everywhere. We were forced to flee into the bushes leaving behind all our belongings... we later settled we u are seeing us today... I made one month without taking my ARVs. (Male 45 years, on ARV).

4.1.6. Frequency of drug consumption during the crisis

As much as 35% of participants missed more than four doses of their treatment during this period. 31% missed doses a few times, 195 missed always, 135 never missed while 3% no longer on treatment .

Patients who relied on traditional healers could not follow their medications too because of the change in environments and locations.

.....I had a traditional doctor who was giving me medicines (herbs) for my condition..... I cannot get to him now because he is far in my village. (Male 58 years, HIV positive)

Health Care givers that we interviewed included health workers (laboratory technicians, dispensary workers, nursing officers, clinical officers, and physicians), herbalists and churches.

4.2.1. Treatment procedures during the crisis.

Health systems had also been put under strain in the crisis hit Regions. This had hampered the treatment and prevention of HIV. Healthcare staff find it harder to do their jobs and access facilities – this was due to a range of factors including safety, access to facilities and non-payment of wages. Similarly, patients could not be able to access healthcare facilities. This conflict had also caused problems with the supply of medication, including antiretroviral drugs, and prevention items such as condoms and testing kits.

There is a variety of treatment options used by care givers to treat and follow-up PLWH in the conflict affected region of North West. Both conventional and non-conventional methods had been used to either alleviate symptoms or treat PLWH in the Region. Unconventional care givers use herbs and other substances to treat patients.

*...Since the clinics are non-operational here, I use my knowledge as a herbalist to get the correct mixture of herbs to help my patients with. At first after completing treatment here I ask patients to go and continue ARVs... (*Man, 55 years, herbalist).

...The only thing I can do here is to pray to God Almighty for the patients and give them sacred portions like the 'holy water' to help them at home. We also give them advice on how to live and interact with others... and how to become good Christians... (Man 49 years, pastor)

Health care facilities in the areas tried their best to deliver adequate health care to PLWH. Their perception of treatment was chiefly based on pathology. They believed that every pathology has a cause which is biological and has a solution to it. Biomedical treatment followed a specific approach which goes from testing, diagnosis and treatment to follow-up.

...After HIV is diagnosed, patients are initiated to specific ART programs depending on various factors and routine follow-up of patients to measure their viral loads, CD4.... This crisis however makes it difficult for us to perform all these procedures and steps. (Woman, 36 years, nurse).

4.2.2. Effect of crisis on care of clients.

The treatment seeking behavior and care of PLWH has reduced drastically because of the crisis. Hospitals have been burnt down, herbalists, pastors tortured, kidnapped, killed or chased out of some communities, leaving PLWH no chance of acquiring treatment or survival.

*...The number of patients here has reduced greatly. Most of them have moved out to other cities or countries for safety.... (*Man, 47 years, health care provider)

*...Some of our centres were destroyed in some areas. All drugs and documents destroyed. We lost tracts of our clients... (*Man, 41 years, health care provider).

Health care providers explained that clients were reluctant to travel long distances to get access to treatment because of fear and delay.

...Clients fear meeting armed fighters on the way, and fail to keep appointments or cannot wait in the line at the clinic beyond a certain time... (Man, 35 years, Health care provider).

Personally, I am concerned about the health of my patients for whom I have lost sight. I do not know if they are still here or not nor if they have continued their treatment. (Male health worker, 38 years)

Drug shortages and inadequate drug supply were also highlighted as a major shortcoming brought about by the crisis situation.

...Second-line drugs are not available in our health units hence clients on these miss their dose. They have to travel to Bamenda town or other towns in order to get access to them.... (Female, 29 years health care provider).

Some health care providers underscored the deterioration of their clients' health as a result of the *crisis.*

I was following up this PLWH for more than 3 years now. But for some time he has not been attending the clinic but just for last month when he presented here in a very bad shape (....) roads blocks caused him not to continue his treatment and he relied on traditional herbalists (...) His CD4 count was 40. He unfortunately passed away two days later. (Female, 44 years, health care provider).

Some patients who had 1 to 2 months appointments with us, come months later when their health has degraded. We see these cases every day. I do not blame them though as some leave in zones of difficult assess since roads are blocked and means of displacement reduced (Female health worker, 43 years).

4.2.3. Availability of health care providers during the crisis.

Most health care providers have left the severely hit areas of the Region making it difficult for PLWH to get access to treatment. The few health structures that are functional cruelly lacked experienced and qualified health care providers to run them.

I use to leave from Bamenda every morning to Bali for work. I used my bike (.....). I could not keep going now because of the fighting. I'm afraid.... you can meet anyone on your way, he can kill you or kidnap you for ransom (...). (Man 43 years, health care providers).

Traditional healers have also come under attacks and forced to flee.

I had my 'medicine house' place (herbal clinic) in the village, and I use to treat persons having HIV. One day armed men came to my place and said I was helping the opposing side with charms and that I should disclose them before the next day (...). I was well beaten and threatened. I had to flee for my safety (....) (Man, 56 years, herbalist).

4.2.4. Proposals for the betterment of patients.

Respondents proposed a number of strategies to facilitated access to medication to PLWH.

Health care providers solicited the use of NGOs for easy distribution and delivery of ARV to PLWH trapped in the villages.

In my opinion, we can solve this problem by implementing strategies for long and lasting peace in the region and involving large NGOs and allowing them access to all the areas of the region (Female health worker 33 years).

Some preconized increasing the supply given to patients to maximize therapeutic adherence.

...During times of drug shortages and conflicts... patients should be given two-month' supply of ART instead of the normal one-month supply.... (Male, 28 years, health care provider).

Others proposed the creation of social goups and ties for patients to help out each other in times of need.

(...) In our church we encourage patients to form social and prayer groups. This will make them to grow stronger and overcome the challenges that they face (....). (Male 60 years, pastor).

Conclusively, many patients have difficulties to adhere to their different therapeutic options as a result of the crisis that has rendered acquisition of treatment not possible or has interrupted the treatment that used to be obtained by these patients. While some have resorted to other treatment options, others have abandoned treatment to ensure their safety first.

While HIV is a chronic condition that can be managed through antiretroviral therapy (ART), it is critical that treatment be adhered to. Though earlier treatment regimens were complex and included high pill burdens and/or complicated administration protocols, treatment options have significantly expanded. Modern treatments are highly efficacious, well-tolerated, and safe (CADTH Common Drug Review, 2018). Additionally, newer therapy includes fixed-dose combination treatment (also known as a single-tablet regimen: one pill, taken once daily, with at least two active agents) which has shown to improve adherence when compared to multiple-tablet regimens (CADTH Common Drug Review, 2018). We found that the crisis situation in the North West region has impacted the adherence of ART by PLWH.

4.3.1. Impacts of nonadherence on patients.

The goals of ART are to prevent onward transmission of the virus, restore or retain immune function, and suppress viral replication. By curbing viral replication, HIV disease progression is prevented, as are HIV-related morbidity and mortality (CADTH Common Drug Review, 2018). However, ART is not curative: it must be taken indefinitely to sustain suppression of HIV. Nevertheless, long-term adherence to ART in the crisis hit regions remained a challenge for a number of reasons cited above.

4.3.2. Nonadherence and cost of treatment.

Among the respondents, there was the general consensus that patients with less adherence to ART had higher chances of developing complications and thus become hospitalized in emergencies and for longer periods of time which is rather very costly. Those who were less adherent had higher mean annual medical costs (excluding pharmacy costs) compared to highly adherent patients.

Patients who do not follow their treatment well usually come here when they are very sick. We will need to hospitalize them in emergency wards and you know how expensive it is for the patients. (....) (Man 38 years, health care provider).

Participants who reported less adherence were significantly more likely to have emergency department visits. Additionally, those who reported nonadherence were also more likely to have a longer duration of hospital admission compared. Participants who reported comorbidities were more likely to report longer duration of hospital admission. Overall, participants who were less adherent to ART were more likely to visit the emergency department and more likely to report a prolonged hospital admission.

....The crisis started when I was already enrolled into ART. With the crisis and everything, I could not take my medications again because roads were not passing, and our health Centre here is not supplying again (....). I fell seriously ill a few months ago and was taken to Bingo (hospital) (....) I spent 3 months in the hospital and had to pay huge sum of money for tests, treatment and hospital stay. (Woman 45 years, HIV positive).

4.3.3. Nonadherence and mortality

Our findings suggested that lower adherence contributed to complications of HIV leading to longer hospital stays and increased mortality as a result of opportunistic diseases and comorbidities.

The mortality of HIV-infected patients admitted in emergency units in our study was in line with previous reports which concluded that incomplete adherence to ART was significantly associated with increased risk for non-cardiovascular-related mortality among virally suppressed people living with HIV (Castillo-Mancilla, 2021).

I received one of my patients for I loss sight months ago. She was very sick and tired from her condition. We admitted her and put her on the second line therapy but she died the next morning. It's certain she has not been following her treatment (Female 50 years, health care provider).

4.3.4. Impacts of nonadherence on the health system and the community at large

Nevertheless, nonadherence to ART appeared to impact healthcare utilization and costs, mortality, sexual risk behaviours and viral resistance to ART (Nijhawan, 2015).

4.3.5. Impacts of ART nonadherence on healthcare utilization.

People living with HIV typically had unscheduled hospital visits that were potentially preventable. Hospital readmissions and stays were found to increase in patients who reported lower adherence to ART.

There are patients who can come here five times a month for conditions and complications that were caused by them skipping or not taking their drugs at all (...). And these diseases could be prevented if they followed their treatment. (Man, 30 years, health care provider)

The associations between healthcare utilization and preventable readmissions reflect the complex relationship that exists between inpatient and outpatient care visits. These findings corroborated with other studies in Dallas, Texas, who found that not receiving ART greatly increased the odds of a preventable readmission to hospital (Nijhawan, 2015).

4.3.6. Nonadherence and sexual risk behaviours.

Perhaps the most obvious outcome of nonadherence to ART is onward transmission of HIV; indeed, preventing transmission is one of the main goals of ART. HIV treatment reduces a person's viral load to an undetectable level, and people with HIV who maintain an undetectable viral load have effectively no risk of transmitting HIV to their HIV-negative partners through sex (Berhan, 2012).

(....) nonadherence to ART…undermines the potential for antiretroviral therapies to reduce HIV transmission to HIV negative partners... (Male, 44 years, health care provider).

Our study shows that PLWHA who had poor adherence to ART were more likely to have unsafe sex. This is consistent with findings in a meta-analysis conducted in sub Saharan Africa where, Berhan et al (Berhan, 2012). attributed the positive changes in sexual behavior of PLWHA to their good adherence to ART. Promoting adherence to ART may, therefore, help prevent the spread of HIV infection in the population especially HIV infection with resistant viral strains.

The risk of having unsafe sex decreased with the duration of ART. This showed that the duration of ART was associated with safe sexual behaviors because of the effect of continuous counseling provided to these patients. This observation was also reported by other authors in sub-Saharan Africa. Contrary to these studies and ours', a study in Togo in 2014 (Issifou Yaya *et al.,* 2014) found that PLWHA, who begin ART usually, live with the symptoms of AIDS, decreasing sexual desire and increasing reluctance to engage in risky sexual practices. This suggests relaxation in the observance of preventive behaviors over time by PLWHA on ART.

(....) PLWH having unprotected sex are usually those recalcitrant ones who do not take their drugs (....). And most of them began their treatment years ago. I think continuous counselling is the key. (Man, 43 years, health care provider)

4.3.7. Nonadherence and acquired HIV drug resistance.

Acquired HIV drug resistance can occur when an individual living with HIV has: poor adherence to ART, treatment interruptions, inadequate drug concentrations, and/or suboptimal drug combinations (Clotet, 2004).

In most of the participants, the most common reason for unscheduled treatment interruptions was nonadherence. Participants who had treatment interruptions experienced treatment failure due to selection of drug resistant virus As a consequence, the threat of resistance to first-generation NNRTIs is highest at low levels of adherence, rather than at moderate adherence, because even the lowest concentrations of these NNRTIs create enough selection pressure to affect HIV (Clotet, 2004). Protease inhibitors (PIs) and most nucleoside reverse transcriptase inhibitors (NRTIs) require multiple mutations, each of which alter enzyme function and could make the virus less fit. These drugs also have more rapid clearance. It is therefore not surprising that NNRTI resistance is seen more often than PI or NRTI resistance (Clotet, 2004). Reported mutations to NNRTIs, NRTIs, PIs, Entry and Integrase Strand Transfer Inhibitors are updated regularly by the International AIDS Society (IAS)-USA Drug Resistance Group and can be accessed at IAS-USA's website.

....*When patients come here with treatment failure, we discover that the drugs they are on have become resistant probably because they miss doses (...).* (Female, 40 years, health care provider).

I went to the hospital for checkup the other day and was told my drugs are not working again, that they will need to change them and put me on a different line of treatment. It's true that there were times that I could not follow the treatment because I didn't have transport to come here. And they said it's the cause (...). (Female, 36 years, on ART).

Missing out doses of ART s can lead to drug resistance and a need to change some molecules which may be cumbersome to many patients and may not improve on the quality of their care.the crisis situation can lead to missed doses thereby drug resistance.

CONCLUSION

This study is entitled, Therapeutic Adherence of HIV/AIDS Patients in Crisis Situation in Bamenda: A Contribution to Medical Anthropology. During war and conflict, civilians are often subjected to mass displacement, human rights abuses, including sexual violence, and are left in conditions of poverty that might force them to use commercial sex to survive. People living with HIV in conflicts zones face a variety of challenges in obtaining proper health care and follow up. This study had as main objective to examine the challenges faced by HIV patients in adhering to their treatment options during crisis situation in Bamenda Cameroon. Three secondary questions, objectives and hypothesis were examined.

A qualitative approach was used with a questionnaire whose trends were used and not generalized, in tackling the primary and secondary sources of data. This permitted us to explore both the descriptive aspects and qualitative sources using in-depth interviews. Participants in our study included PLWH, health care providers, and traditional healers. This gave us a broad picture of the situation in the Region.

Our first secondary question was to know if patients in these restive regions still adhere to their therapeutic options. We hypothesized that, crisis and unrest may have led to therapeutic non adherence in patients living with HIV/AIDS (PLWH). The objective here was to assess the non-adherence to therapeutic options by PLWH.

This study found that the armed conflict in the English speaking regions has caused the collapse and malfunction of health systems in the area leading to a limited supply of essential drugs and personnel for the adequate follow-up of persons with HIV. Our study underlined many obstacles to the ART programs in the crisis area which included issues related to health need prioritization, effectiveness, feasibility, safety and ethics. Adherence to conventional treatment was found to be low due to forced displacement and mobility of the population. Destruction of health services has been common in the conflict-turned North West region of Cameroon. The number of health care providers has also reduced due to death, injury or flight. In addition, drug supplies have been plundered and supply routes interrupted preventing the supply of new drugs. All these have contributed to lower HIV treatment adherence in affected persons.

Barriers to adherence perceived by focus groups, both community participants and health care workers, included: security, eviction, distance, food insecurity, absence of health facilities and personnel, cost of transportation and lack of displacement and stigma. These barriers have been cited in studies in other low income countries and may be especially acute in a rural, impoverished setting worsened by conflict. Several factors perceived as barriers by community

participants appeared important to health care workers. While our study was not designed to compare these two groups with statistical rigor, the differences in their perspectives provide insight into potential interventions that may bolster adherence. Several interventions can be developed on the basis of information gathered during our study. Understanding patient-important barriers to ART adherence is critical to effectively scaling up ART access. The logistical and security concerns highlighted by participants in this study, merit attention from public health officials and clinicians to aid PLWH in Bamenda, Cameroon. Focus group discussions highlighted differing perceptions of barriers to adherence among community participants and health care workers. Cultural barriers were also noted, including health care worker rudeness and disrespect, sharing of antiretroviral drugs with family and friends, and the view of illness as acute and transient. Hence, both structural changes to programs and culturally sensitive education efforts are needed to improve adherence.

The next secondary question sorted to know if there were any other ways these patients could be followed up to adhere to their treatment. We hypothesized that; patients may have resorted to other ways or options if they were confronted with no other choice. The objective was to analyze the different options PLWH had resorted to in the restive regions. Majority of patients interviewed used ARV for their treatment. Even though the crisis had hampered the sector greatly, The choice of healthcare sources depended largely on general health beliefs, whether PLWH were more inclined towards biomedical, faith-based or traditional sources, as well as more specifically how the conflict has affected their treatment. These health inclinations and explanations influenced patients' preferred source of healthcare, which could have implications for delays in reaching the appropriate form of care and treatment.

Health systems had also been put under strain in the crisis hit Regions. This had hampered the treatment and prevention of HIV. Healthcare staff find it harder to do their jobs and access facilities – this was due to a range of factors including safety, access to facilities and non-payment of wages. Similarly, patients could not be able to access healthcare facilities. This conflict had also caused problems with the supply of medication, including antiretroviral drugs, and prevention items such as condoms and testing kits. There is a variety of treatment options used by care givers to treat and follow-up PLWH in the conflict affected region of North West. Both conventional and non-conventional methods had been used to either alleviate symptoms or treat PLWH in the Region. Unconventional care givers used herbs and other substances to treat patients. Faith based treatment was also found to play an important role in the treatment of patients.

Some patients tend to combine the various treatment options so as to get relieve. They underlined various reasons for their choices. A majority of participants used more than one option because they did not know which one will be effective. PLWHA also indicated willingness to alternate between, or combine, different medical systems. The non-exclusive nature of traditional medicine in the region is illustrated by how some healers framed their discourse and demonstrated a clear disposition for partnership with biomedicine. This duality between traditional medicine and the clinical biomedicine was explored in the study.

The last research question was; what consequences have these caused to these patience as a result of poor therapeutic adherence? It sorted to identify the adverse consequences non adherence had on patients and community in general. Nonadherence to ART was found to impact healthcare utilization and costs, mortality, sexual risk behaviors and viral resistance to ART. The general consensus was that patients with fewer adherences to ART had higher chances of developing complications and thus became hospitalized in emergencies and for longer periods of time which is rather very costly. Those who were less adherent had higher mean annual medical costs (excluding pharmacy costs) compared to highly adherent patients. Our findings suggested that lower adherence contributed to complications of HIV leading to longer hospital stays and increased mortality as a result of opportunistic diseases and comorbidities. People living with HIV typically had unscheduled hospital visits that were potentially preventable. Hospital readmissions and stays were found to increase in patients who reported lower adherence to ART. The most obvious outcome of nonadherence to ART was onward transmission of HIV. Our study demonstrated clearly that PLWHA who had poor adherence to ART were more likely to have unsafe sex. Promoting adherence to ART may, therefore, help prevent the spread of HIV infection in the population especially HIV infection with resistant viral strains. Participants who had treatment interruptions experienced treatment failure due to selection of drug resistant virus. As a consequence, the threat of resistance to first-generation NNRTIs is highest.

Several interventions can be developed on the basis of information gathered during our study.

Firstly, provide food supplementation to patients enrolled in care. The issue of food insecurity is particularly challenging in Bamenda, as the region has high background rates of moderate and severe malnutrition among young children aggravated by the conflict. This suggested that even when illness is not a factor, acquiring adequate and nutritious food in the Region is a

challenge. Clinicians and community members agree that adding food supplement programs would be a means of improving patient adherence to medication.

Secondly, integrate traditional healers and religious healers into the medical system. The treatment activities of traditional practitioners have come under scrutiny in recent years. Our findings clearly underlined this concept suggesting that a majority of the population has sought care from a healer, but often seeks care from a clinical site first. Participants who spoke about traditional healers as barriers to clinical care primarily shifted the "blame" of their using traditional medicine onto the crisis situation. Use of complementary and alternative medicines has been found to delay patient initiation of ART in other settings. While others have noted an association of alternative medicine use with poor ART adherence. Effective partnerships with traditional healers would be beneficial given the frequency with which their services are sought for HIV and non-HIV related conditions alike. Promoting better dialogue between patients and providers can probe patient fears and concerns and provide insight into potential challenges to optimal patient adherence. In the absence of resources necessary to provide transportation and food subsidies to patients on ART or employ armies of community health workers facilitating directly observed ART administration, ART programs in rural Africa face daunting challenges to ensure adequate adherence**.**

In addition to traditional understanding of effective treatment, the sharing of ARVs was cited by community participants as a barrier to adherence. Patients may have resorted to sharing medication during "stock-outs" that have occurred, especially early in ART roll-out. However, we hypothesize, based on comments from participants, that sharing medication may be more strongly related to the establishment of social networks among community members and inaccessibility to health facilities. While ART is provided free of charge, the travel cost and time associated with traveling to clinical sites may induce some to borrow medication from friends or family members. Given the prevalent view that illnesses have a spiritual origin, rather than an infectious one, we speculate that rigid adherence is a goal of health care workers more often than patients. To counter these beliefs we believe expert patients, can effectively teach new patients skills to successfully adhere to their medication.

We believe our study provides new insights into ART adherence that can inform programmatic changes within the North West Region. The strengths of our study are the broader insights provided by the semi quantitative assessment of focus groups, both in the community and among HCW. Conducting focus groups with men, women and HCW in each community

allowed us to effectively reach a diverse group of participants. A limitation of our findings is that focus groups are known to elicit more views of verbal participants than shy ones. Some participant's spoke of their own experiences with HIV, while others recounted stories experienced by their family and friends. The security challenges posed by the crisis further limited the attainment of the desired sample size.

Effective partnerships with traditional healers would be beneficial given the frequency with which their services are sought for HIV and non-HIV related conditions alike. Promoting better dialogue between patients and providers can probe patient fears and concerns and provide insight into potential challenges to optimal patient adherence. In the absence of resources necessary to provide transportation and food subsidies to patients on ART or employ armies of community health workers facilitating directly observed ART administration, ART programs in rural Africa face daunting challenges to ensure adequate adherence.

To our knowledge, this study represents the first reported assessment of patients' nonadherence to ART in a conflict setting in Bamenda and should be of interest to PLWH, clinicians, and the international the community at large. Efforts to ensure uninterrupted care in these crisis-hit populations remain a core challenge. Efforts to retain patients using mobile counselors and health workers are effective strategies to ensure continued care.

Ethnomethodology stipulates that the explanation of theories should not be general but should be contextual. The idea of therapeutic options varies from culture to culture and should be examined if we have to look at the adherence to these options. The ethno-perspective or ethnanalysis, that means, the reflexive basic method common to all ethnologists and anthropologists, is first analysis before interpretation from the highest platform stand point theory. Preceded and enhanced with a synopsis of current theories in ethno-anthropology, the phenomenology of the milestones of the analysis that are holistic, contextual, and endosemic are the focus. Culture is not a firm scientific knowledge though in certain cases, it integrates it. Culture is not a science of life, but a lifestyle, a formulation and a solution to the problem of daily living, formulation and solution made of one being inserted into realities-the-world where they take effect, coherence, not only truth. From the day a community asks as the only true, universal, what it says, thinks, does, and then it yields the seeds of excluding other communities.The population of Bamenda has the practice of medical pluralism. They use a variety of ways to treat themselves from HIV ranging from ARV, supplements, prayers and

traditional or herbs. Some or all of these have been affected by the crisis thereby affecting the overall health belief system of these patients.

With the increase insecurity and constant gunshots, coupled with road blocks , these patients are left with the opportunity to either give up on their treatment options taking as priority their safety or to use the theory of resilience to cope in this time of crisis through the use of alternatives to treat themselves. Resilience theory argues that it's not the nature of adversity that is most important, but how we deal with it. When we face adversity, misfortune, or frustration, resilience helps us bounce back. It helps us survive, recover, and even thrive in the face and wake of misfortune, but that's not all there is to it. This can either make us to adapt or transform us as seen in the conceptual model.

Critical theories can provide new ways of thinking about professional roles, medical decisions, disease diagnosis and etiology, treatment adherence, prevention messaging, and all sorts of health-related behaviors and systems of understanding. CMA addresses the social origins of illness, such as the way in which poverty, discrimination, industrial pollution of the environment, social violence, and fear of violence contribute to poor health.

The crisis in the North and South West regions of Cameroon especially in Bamenda has had a great impact on the portion of the population living with HIV. They have not been able to obtain their treatment because of factors like road blocks, closure of some health facilities, lockdowns, movement of health personnel as a result of violence, rupture of supplies to health facilities, amongst others. Most have been irregular in their treatment choices even against their will; some have resorted to other treatment networks because they have no other option to choose. This has greatly influenced the overall health of PLWHA. This affirms our hypothesis that the crisis has a negative impact on the therapeutic choices and adherences of PLWHA.

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APPENDIX

INTERVIEW GUIDE FOR TREATMENT CENTERS, HERBAL HOME/ CHURCH PERSONNEL

I am AYUMBI ABONGWA PAUL. A masters level two student of the University of Yaounde I. I am carrying out research on the topic **THERAPEUTIC ADHERENCE OF HIV/AIDS PATIENTS IN CRISIS SITUATION IN BAMENDA: A CONTRIBUTION TO MEDICAL ANTHROPOLOGY.** Wish to get your consent to answer to this interview with all sincerity bearing in mind the fact that confidentiality and anonymity shall be strictly respected. Knowledge and information gotten from this study shall be used for academic purposes as well as to better the care given to patients in times of crisis. Thanks for your cooperation. Best regards.

1) How do you treat patients in your facility?
2) For how long have you been treating patients?
3) What can you say about the crisis in Bamenda?
4) Can you compare the number of patients you used to have before the crisis and during the crisis?
5) How is the general health situation of your patients now as compared to before the crisis?
6) Are there some circumstances that have made you unavailable to give treatment? How do you handle appointments on ghost town days?
7) What do you think have become of your lost patients during this crisis?
   Do you have an idea whether they still get treatment?
8) What do you think can be done to help your patients during this crisis?
9) Is there any other thing you want to talk to us about?

Interview guide for patients

I am AYUMBI ABONGWA PAUL. A masters level two student of the University of Yaounde I. I am carrying out research on the topic **THERAPEUTIC ADHERENCE OF HIV/AIDS PATIENTS IN CRISIS SITUATION IN BAMENDA: A CONTRIBUTION TO MEDICAL ANTHROPOLOGY.** Wish to get your consent to answer to this interview with all sincerity bearing in mind the fact that confidentiality and anonymity shall be strictly respected. Knowledge and information gotten from this study shall be used for academic purposes as well as to better the care given to patients in times of crisis. Thanks for your cooperation. Best regards.

1) When did you start taking treatment?
2) Can you narrate to us how the crisis has affected your choice of treatment?
3) What circumstances has ever led you not to respect your treatment during this crisis?
4) What changes have you made on your therapeutic choice or choice of treatment during this crisis period?
5) What do you think can be done to help the situation of people like you and others to continue to receive treatment of their choice during this crisis?

ORAL SOURCES

LIST OF INFORMANTS

NO	AGE	SEX	ETHNICITY	EDUCATION	OCCUPATION	RELIGION
1	60	M	Mankon	Secondary	Former Soldier	Christianity
2	40	F	Awing	Elementary	Petit Trader	Christianity
3	49	F	Chomba	Primary	Farmer	Christianity
4	52	M	Santa mbe	Secondary	Guard	Christianity
5	48	F	Akum	University	Teacher	Christianity
6	33	F	Mendankwe	Elementary	Trader	Christianity
7	35	F	Kom	University	Teacher	Christianity
8	53	F	Nkwen	Elementary	Driver	Christianity
9	43	F	Belo	Secondary	Police	Christianity
10	38	F	Bali	University	Administrator	Christianity
11	31	M	Banso	University	Lecturer	Christianity
12	52	M	Oku	University	Teacher	Christianity

13	**47**	**M**	**Nkambe**	**Secondary**	**Entrepreneur**	**Christianity**
14	**33**	**M**	**Banja**	**Secondary**	**Chef**	**Christianity**
15	**39**	**M**	**Awing**	**University**	**Nurse**	**Christianity**
16	**37**	**M**	**Bafut**	**secondary**	**Drug Seller**	**Christianity**
17	**39**	**M**	**Bambui**	**University**	**Teacher**	**Christianity**
18	**50**	**M**	**Ngie**	**University**	**Agronomist**	**Christianity**
19	**49**	**M**	**Batibo**	**University**	**Data Clerk**	**Christianity**
20	**50**	**M**	**Ossing**	**University**	**Nurse**	**Christianity**
21	**43**	**M**	**Bakweri**	**University**	**Doctor**	**Christianity**
22	**45**	**M**	**Bafo**	**university**	**Accountant**	**Christianity**
23	**58**	**M**	**Bayangi**	**University**	**Engineer**	**Christianity**
24	**55**	**M**	**Bangwa**	**Secondary**	**Electrician**	**Christianity**
25	**49**	**M**	**Akum**	**Elementary**	**Driver**	**Christianity**
26	**45**	**F**	**Mbengwi**	**Secondary**	**Soldier**	**Christianity**

27	**36**	**F**	**Mendankwe**	**University**	**Counselor**	**Christianity**
28	**38**	**M**	**bororo**	**Elementary**	**Farmer**	**Islam**
29	**36**	**F**	**Nsongwa**	**Elementary**	**Capenter**	**Christianity**
30	**35**	**M**	**Mankon**	**Elementary**	**Farmer**	**Christianity**
31	**44**	**M**	**Bafouchu**	**Secondary**	**Mechanic**	**Christianity**
32	**41**	**M**	**Mbouda**	**University**	**Marketer**	**Christianity**
33	**47**	**M**	**Wum**	**University**	**Banker**	**Christianity**
34	**38**	**M**	**Awing**	**Elementary**	**Driver**	**Christianity**
35	**29**	**F**	**Mankon**	**University**	**Nurse**	**Christianity**
36	**43**	**M**	**Nkambe**	**Secondary**	**Trader**	**Christianity**
37	**44**	**F**	**Banso**	**University**	**Teacher**	**Christianity**
38	**29**	**F**	**Nkwen**	**University**	**Psychosocial Worker**	**Christianity**
39	**43**	**M**	**Bali**	**University**	**Nurse**	**Christianity**
40	**44**	**F**	**Widikum**	**University**	**Nurse**	**Christianity**
41	**43**	**F**	**Bakundu**	**Secondary**	**Nurse**	**Christianity**

42	**33**	**F**	**Bamukumbit**	**University**	**Doctor**	**Christianity**
43	**30**	**M**	**Ngembo**	**University**	**Doctor**	**Christianity**
44	**28**	**M**	**Batibo**	**University**	**Nurse**	**Christianity**
45	**49**	**M**	**Mankon**	**University**	**Pastor**	**Christianity**
46	**60**	**M**	**Bafut**	**Secondary**	**Pastor**	**Christianity**
47	**55**	**M**	**Oku**	**Elementary**	**Herbalist**	**None**
48	**56**	**M**	**Nkambe**	**Secondary**	**Herbalist**	**None**

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REGIONAL DELEGATION FOR THE NORTH WEST

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BAMENDA, the 31 MAR 2021

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Le Délégué Régional
Tel: 233 363 289/674493327

TO WHOM IT MAY CONCERN

Subject: ADMINISTRATIVE AUTHORISATION TO CARRYOUT RESEARCH

AYUMBI ABONGWA Paul, Student at the University of Yaounde I Department of Clinical Sciences, Faculty of Health Sciences, is authorised to carry out his Research in the Region, titled: "***Therapeutic Adherence of HIV/AIDS Patients in Crisis Situation in Bamenda, a Condition to Medical Anthropology***". This Research will last for a period of three month as from March 2021.

You are therefore requested to offer the necessary support to enable him achieve the objectives of this very important academic exercise and report to my office any challenges you might face.

FOR THE DELEGATE
AND BY DELEGATION
THE CHIEF OF BRIGADE

REGIONAL DELEGATE OF PUBLIC HEALTH

MINISTRY OF PUBLIC HEALTH NORTH WEST REGION MINISTERE DE LA SANTE PUBLIQUE REGION DU NORD OUEST DELEGATION REGIONALE REGIONAL DELEGATION

Amba Lionel Nkw
MEDICAL DOCTOR
FMBS (EX-CUSS)
ONMC 8171

Cc/.

- The Concerned
- File

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FACULTE DES ARTS, LETTRES ET SCIENCES HUMAINES

DEPARTEMENT D'ANTHROPOLOGIE

FACULTY OF ARTS, LETTERS AND SOCIAL SCIENCES

DEPARTMENT OF ANTHROPOLOGY

Yaoundé, le .....

AUTORISATION DE RECHERCHE

Je soussigné, Professeur **Paschal KUM AWAH**, Chef du Département d'Anthropologie de la Faculté des Arts, Lettres et Sciences Humaines de l'Université de Yaoundé I, atteste que l'étudiant **AYUMBI ABONGWA Paul**, Matricule **18V595** est inscrit en Master II dans ledit Département. Il mène ses travaux universitaires sur le thème : ***«Therapeutic Adherence Of HIV/AIDS Patients In Crisis Situations In Bamenda : A Contribution To Medical Anthropology»*** sous la direction du **Pr SOCPA Antoine.**

A cet effet, je vous saurais gré des efforts que vous voudriez bien faire afin de fournir à l'intéressé toute information en mesure de l'aider.

En foi de quoi la présente autorisation de recherche lui est délivrée pour servir et valoir ce que de droit.

Le Chef de Département

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