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Original Research Article

Cultural Representations and Social Determinants of Cardiovascular Disease among the Biyem Assi - Yaoundé of Centre Region, Cameroon

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Abstract: ***Objective:*** To examine how the various existing health systems are represented in the health areas and in the health districts in the management of cardiovascular disease in Yaounde, Cameroon. It describes the taxonomy of health systems and meaning of CVDs in the community. It explains the different types of health systems which includes: biomedical, faith-healing and the African traditional health system which has eventually influenced their lifestyle and their therapeutic choices. It does an elaboration of the cultural representations of health systems and CVDs by members of the community. Drawing on the perspectives of medical anthropology, this study explores the cultural meanings, local beliefs, social relations, economic conditions, and therapeutic practices attached to cardiovascular diseases and to examine the social determinants influencing disease occurrence, interpretation, prevention, and treatment among the Biyem Assi - Yaoundé of Northwest Cameroon. ***Methodology:*** Using a qualitative ethnographic approach, data were collected through semi-structured interviews, participant observation, and documentary analysis. Cardiovascular diseases (CVDs) have emerged as a major public health challenge worldwide, particularly in low- and middle-income countries undergoing rapid epidemiological and socio-economic transitions. In Biyem-Assi District at Yaounde, increasing rates of hypertension, stroke, and heart disease have highlighted the importance of understanding the sociocultural contexts in which these conditions develop. ***Results:*** The findings reveal that cardiovascular diseases are not perceived solely as biological disorders but are understood through a complex framework that incorporates social stress, family conflicts, economic hardship, spiritual forces, and cultural interpretations of bodily imbalance. Furthermore, poverty, nutritional transitions, limited access to healthcare, and psychosocial stress emerge as significant determinants of cardiovascular vulnerability. Cardiovascular diseases (CVDs) are a leading cause of morbidity and mortality worldwide, with rising prevalence in low- and middle-income countries undergoing rapid socio-economic and epidemiological transitions. In sub-Saharan Africa, rural populations are particularly affected due to structural vulnerabilities and changing lifestyles. ***Discussion****:* Research conducted in Ghana and other African countries demonstrates that hypertension is frequently associated with stress, excessive worrying, family conflicts, and economic hardship rather than solely with physiological mechanisms (De-Graft Aikins, 2020). These findings suggest that cardiovascular diseases should be understood as both biological and sociocultural phenomena. The findings of this study show that cardiovascular disease in the Biyem Assi - Yaoundé community is understood not only as a biomedical condition but also as a socially embedded illness shaped by everyday experiences, relationships, and structural conditions. ***Conclusion****:* The study argues that effective cardiovascular disease prevention and management strategies in rural African communities require culturally informed and socially responsive interventions. Integrating local knowledge systems, traditional healers, and community leaders into public health programs may contribute to more sustainable and contextually appropriate health outcomes.

Keywords: Cardiovascular diseases, Medical anthropology, Social determinants of health, Cultural representations, Biyem Assi - Yaoundé.

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INTRODUCTION

Cardiovascular diseases (CVDs) constitute one of the leading causes of mortality and morbidity worldwide. According to the World Health Organization (WHO, 2025), nearly 20 million deaths annually are attributable to cardiovascular conditions, accounting for approximately 32 percent of global mortality. While CVDs were historically considered diseases of industrialized societies, recent epidemiological evidence demonstrates a substantial increase in their prevalence across low- and middle-income countries, particularly in sub-Saharan Africa. The African continent is currently experiencing a profound epidemiological transition characterized by the coexistence of infectious diseases and a growing burden of non-communicable diseases (NCDs). Urbanization, demographic change, globalization of food systems, and socioeconomic transformations have significantly contributed to the rising prevalence of hypertension, diabetes, obesity, and cardiovascular disorders (Obonyo & Etyang, 2023). In many African societies, cardiovascular illnesses are frequently associated with social stress, family tensions, economic insecurity, emotional disturbances, and supernatural influences. Such interpretations influence patterns of healthcare utilization and frequently lead individuals to navigate between biomedical and traditional therapeutic systems (Mendenhall *et al.,* 2022, De-Graft Aikins, 2020).

In Cameroon, cardiovascular diseases have become a major public health concern, with hypertension representing one of the most common chronic health conditions among adults. Despite increasing attention to the epidemiological dimensions of cardiovascular diseases, limited research has explored how rural and urban populations culturally interpret and socially experience these illnesses. Medical anthropology has long demonstrated that disease cannot be understood solely through biomedical frameworks. Illness experiences are embedded within cultural systems of meaning, social relationships, and historical contexts (Kleinman, 1980). Individuals and communities develop explanatory models that shape their understanding of disease causation, symptom recognition, therapeutic choices, and treatment adherence. Consequently, perceptions of cardiovascular diseases may differ substantially from biomedical explanations and often incorporate moral, social, emotional, and spiritual dimensions.

Medical pluralism refers to the coexistence of multiple therapeutic systems within a society. Across sub-Saharan Africa, individuals commonly combine biomedical treatment with traditional healing practices. This therapeutic pluralism reflects pragmatic strategies rather than opposition to biomedical knowledge. Understanding these healthcare-seeking behaviors is essential for designing culturally appropriate interventions aimed at preventing and managing cardiovascular diseases. Traditional healers continue to play a significant role in healthcare delivery, particularly in rural communities where biomedical services may be inaccessible or financially prohibitive. Patients often move between different therapeutic options according to their understanding of disease causation and treatment effectiveness.

This article investigates the cultural representations and social determinants of cardiovascular disease among the Biyem Assi - Yaoundé people of Centre Region- Cameroon. Specifically, it seeks to understand how local beliefs, socioeconomic conditions, dietary practices, and therapeutic traditions shape experiences of cardiovascular illness. The study addresses two principal research questions: How do the population of Biyem Assi - Yaoundé culturally interpret the causes and treatment of cardiovascular diseases? What social determinants influence cardiovascular health and disease management within the Biyem Assi - Yaoundé community? By addressing these questions, the research contributes to broader debates within medical anthropology studies concerning the interaction between culture, social change, and health in contemporary African societies.

METHODOLOGY

This study was conducted among the Biyem Assi-Yaoundé people in the Centre Region of Cameroon. This selection was motivated by the limited anthropological research on cardiovascular diseases and other non-communicable diseases in rural and Urban Cameroon, despite their growing public health significance. The Biyem Assi social structure is organized within a matrilineal system of kinship and inheritance. In this system, descent is traced through the female line, and women occupy central roles in household organization and family continuity. This social arrangement has implications for household responsibility, caregiving roles, and gendered exposure to social and economic pressures. The community also practices a pluralistic health system in which biomedical services coexist with traditional healing practices and religious forms of healing. Traditional healing practices remain highly significant. Traditional healers provide herbal remedies, therapeutic massages, and ritual interventions aimed at restoring bodily and spiritual balance. Their interventions are particularly sought when illness is interpreted as socially or spiritually rooted.

At the time of fieldwork, the area had Biyem Assi Heath District hospital, several health centres, private clinics, pharmacists, and a large number of traditional healers. Despite this availability of health services, cardiovascular disease, particularly hypertension and stroke, was increasingly reported as a significant health concern. Biyem Assi Health District records indicated a growing number of CVD cases, with hypertension identified as the most frequently diagnosed condition. The hospital also organized monthly consultations dedicated to hypertension and diabetes,

reflecting the increasing importance of non-communicable diseases in the local health profile. This study adopted a qualitative research design informed by medical anthropology. An ethnographic approach was employed because it allows for an in-depth understanding of lived experiences, local knowledge systems, and social practices related to health and illness (Kleinman, 1980). Ethnography provides valuable insights into how cultural beliefs, social structures, and economic conditions shape health behaviors and therapeutic choices. A purposive sampling strategy was used to recruit participants occupying different social positions within the Biyem Assi communities. Semi-structured interviews constituted the primary method of data collection. The interviews explored local understandings of cardiovascular diseases, perceived causes, therapeutic practices, health-seeking behaviors, dietary habits, and experiences of illness. Participants included adult men and women aged 30 years and above; Community leaders and traditional authorities; Individuals diagnosed with hypertension or other cardiovascular conditions; Traditional healers; elderly residents, Family caregivers involved in patient support and disease management, Healthcare professionals working in local health facilities. Three focus group discussions were conducted with mixed participants, including patients, herbalists, and community members. Additional informal discussions were held throughout the fieldwork period. These discussions allowed for collective reflection on local understandings of CVD and the comparison of different viewpoints within the community. Observation was carried out in multiple settings, including hospital wards, outpatient clinics, traditional healer settings, households, funerals, and community gatherings to document everyday practices related to food consumption, work activities, physical exercise, social interactions, and health-related behaviors. We consulted documents that are dealing with health system from WHO, National libraries, American library Yaoundé, Yaoundé private and community libraries such as that of the University of Yaounde I, the library of the Faculty of Arts, Letter and Social Sciences of Yaounde I, Ministry of Scientific Research. Articles, reports, reviews, television, newspapers, and the internet related to our research topic are consulted. This process also involved the categorization of reviews according to their sources and to prepare the interview and research questions. Both inductive and deductive approaches were used: some categories emerged directly from the data, while others were guided by existing concepts in medical anthropology, particularly explanatory models of illness. Triangulation was used to compare findings across interviews, focus groups, observations, and documentary sources in order to ensure validity and consistency of interpretation. Documentary analysis included scientific publications, public health reports, policy documents, and anthropological studies relevant to cardiovascular diseases, social determinants of health. The combination of multiple data sources enhanced the reliability and validity of the findings through methodological triangulation. Secondary data were obtained from hospital records at the Biyem Assi District Hospital, national health reports, WHO publications, and relevant academic literature. These documents provided contextual information on the epidemiological situation of cardiovascular disease in Cameroon. Data were analyzed using thematic analysis following the approach proposed by Braun and Clarke (2006). Interview transcripts and field notes were systematically coded to identify recurring themes and patterns. The analysis focused on socioeconomic determinants of cardiovascular risk, Cultural representations of cardiovascular diseases, interactions between biomedical, traditional, knowledge systems, therapeutic practices and healthcare-seeking pathways. Interpretation of findings was guided by Kleinman's explanatory model framework and the social determinants of health perspective developed by the World Health Organization. Ethical principles governing social sciences research were strictly observed throughout the study. Participants were informed about the objectives of the research and provided voluntary informed consent before participation. Verbal consent was obtained prior to interviews and group discussions. Confidentiality and anonymity were ensured through the use of pseudonyms and the secure handling of research materials. Respect for local cultural norms and traditional authorities was maintained throughout the fieldwork process.

RESULTS

The concept of "*cardiovascular disease*" is a word which is regularly used by patients. Based on the findings obtained from the field, there is little knowledge of the biological cause of the disease by some members of the communities. There are cultural representations of CVDS. It is usually based on their cultural beliefs about the existence of the disease.

- **Meaning and cultural representation of cardiovascular diseases in Biyem Assi**

There are diverse ways of calling cardiovascular diseases in different mother tongues in Biyem Assi District. This is because every culture gives its own cultural meaning and interpretation of a disease. In addition to that, CVDs is known to be a painful sickness which affects the heart of patients consequently leading to high blood pressure, stress, hypertension and heart attack etc. Since not everybody knew how to call the disease in their mother tongue, few informants gave the appellation of this disease and the meaning. In this effect, there are diverse expressions of this disease which is usually based on belief systems. In general, *"cardiovascular diseases" means "disease which affects the heart" or any affection that leads to malfunctioning of the heart or heart disease,* or *"sickness which causes pains in the heart".* For Aghem people in Biyem Assi, Hypertension is locally known as *ngang te co ho te*, referring to high blood pressure. Stroke is widely

recognized as a severe form of heart-related illness, often associated with partial or complete paralysis of one side of the body. In local understanding, stroke is frequently interpreted as a consequence of untreated or long-standing hypertension. Some of the representations are: religious belief, witchcraft, curses, infliction, ancestral spirits, etc. This classification reflects an integrated understanding of cardiovascular illness in which different conditions are linked within a single explanatory category. Rather than distinguishing strictly between cardiac and vascular diseases, the Biyem Assi - Yaoundé conceptual system groups them under a broader notion of "*heart illness*," emphasizing both physical and emotional dimensions of health. The heart thought is not understood solely as a biological organ responsible for pumping blood. It is also regarded as the centre of emotional life, thought, and social experience. As a result, illnesses of the heart are interpreted as conditions that may arise from both physical and social disturbances. The most common form of heart diseases was hypertension and stroke. Stroke is when the body is paralyzed on one side. Also, "*cardio*" refers to the heart while "*vascular*" refers to the blood vessels that are linked to the heart. Thus, CVDs are diseases which are linked to the heart. Hyper means high blood pressure or an increase in blood pressure. Therefore, hypertension is the increase in blood pressure, which comes as a result of increase in social cohesion, shock, and tension. CVDs affects the heart and blood vessels. Furthermore, diseases of the heart can be linked to a vehicle which has a constant speed increase, when the car runs with a speed that is, beyond that limit, it becomes abnormal. Meanwhile, the heart has a normal way it beats, when it becomes faster than its normal way of beating, it can result to heart attack or hypertension. Heart diseases are diseases that attack people at a certain age, mostly from 40 years and above, and mostly pregnant women because they are troubled with many pains, people who often get angry are liable to having CVD. It is a disease which is related to the heart and they are manifested in various forms it has various effects if it is not rescued on time. Thus, stroke is the advanced stage of a prolonged heart disease such as hypertension. CVDs also referred to as heart diseases are often said to be when a patient experiences unending headache, no matter how many tablets they take. An informant said, "*It is a disease which comes when somebody thinks a lot, any kind of thought. For instance, a man may keep thinking on how he has not yet paid his or her children school fees, and the children are being chased away from school, one could be thinking of a love one he lost, thinking on how he has not achieved the things he ought to have achieved in life at a certain age.* (Interview with informant, 04/01/2025, Melen). Furthermore, CVDs is said to come as a result of over thinking, this consequently leads to high blood pressure. Another informant explained that; "*Normally, people are supposed to have blood pressure of 12/80-130/90, but when one goes to the hospital; patients are told their blood pressure is higher than normal. It means the person has developed hypertension, if care is not taken".* (Interview with informant, 04/01/2025, Obili). This disease also means the blood pressure is not normal as it is supposed to be. It causes body weakness, tiredness, and vertigo. So, if a patient has above normal, 120/80, 130/90 it becomes hypertension it can also rise permanently. Tension means when somebody is; under pressure, nervous, continually for a long period of time, he then develops hypertension. There are three types of hypertensions, essential hypertension, where somebody is born with, and the other could be because of shock, such as loss of husband, child, a love one, or missed one's objectives at a point in our daily life activities.

- **Local explanations of cardiovascular disease in Biyem Assi**

Beyond psychosocial interpretations, participants provided a plurality of explanatory models for cardiovascular diseases. These explanations reflect a hybrid epistemology combining biomedical awareness, lived experience, and cultural reasoning. A first category of explanations relates to dietary practices and nutritional change. Many respondents associated cardiovascular diseases with increased consumption of salt, oil, processed foods, and imported products. Older participants, in particular, contrasted current dietary habits with "traditional food," which they considered healthier and more natural. This perception aligns with the broader concept of the global "nutrition transition" which links dietary modernization to rising non-communicable diseases (Popkin, 2022). A second explanatory model involves spiritual and moral dimensions. Some participants suggested that cardiovascular diseases may result from violations of social norms, moral transgressions, or spiritual imbalance. In such cases, illness is interpreted as a form of social or spiritual disorder requiring ritual or traditional intervention rather than biomedical treatment alone. A third category concerns lifestyle changes and physical inactivity. Participants noted that reduced engagement in agricultural labor and increased sedentary lifestyles, especially among younger generations, contribute to weakened physical health and increased vulnerability to heart-related illnesses. These multiple explanations coexist without contradiction, forming a layered understanding of disease causation that integrates biological, social, and spiritual domains.

- **Cultural representations of cardiovascular diseases in Biyem Assi**

The findings indicate that cardiovascular diseases among the Biyem Assi - Yaoundé are not perceived exclusively as biomedical conditions. Rather, they are interpreted through a complex framework that combines physiological, social, emotional, and spiritual dimensions. Participants frequently described cardiovascular symptoms using expressions such as "a burning heart," "heavy blood," or "a tired heart." These expressions reveal culturally specific understandings of bodily processes and disease experiences. Emotional

suffering emerged as a central explanatory factor. Stress, persistent worries, family disputes, grief, and interpersonal conflicts were commonly identified as direct causes of cardiovascular illness. Several participants explained that prolonged emotional distress weakens the heart and disrupts the normal flow of blood within the body. One elderly participant explained: "*When a person thinks too much and carries many worries, the heart becomes weak. The blood no longer moves properly, and illness follows*." (Interview with informant, 04/01/2025, Obili). Such interpretations resonate with findings from other African contexts where hypertension and cardiovascular diseases are closely associated with social suffering and emotional stress. In addition to psychosocial explanations, some participants attributed cardiovascular illnesses to supernatural causes, including witchcraft, ancestral displeasure, or violations of social norms. These beliefs illustrate the interconnectedness of health, morality, spirituality, and social relations within Biyem Assi - Yaoundé cosmology. For many respondents, disease is not simply a biological event but a reflection of broader disruptions affecting individual and collective well-being. On the other hand, there are cultural representation of CVDs in the community which are: religious beliefs; witchcraft, non-curse, infliction, communicable disease, inherited disease, chronic and deadly disease.

- **Religious beliefs**

There is the religious belief of the cause of CVDs on patients in the community. For some people, certain things or gestures are believed to bring good or bad luck which can be the sources of their disease. In some religious groups, it is said that when an individual is suffering from this disease; it could be a sign of punishment from the god. This usually occurs when people refuse to obey the ten commandments of the bible and refusal to live a healthy lifestyle by fasting and praying. When all these are not respected, patients will be affected with this disease. Another issue could be when people join sects; they might likely be infected with this disease. Even though religious leaders believe in demonic causes of CVDs, they still believe in biomedical treatment because to them, evil spirits can still afflict heart disease (CVDs) or the individual can still be exposed to the risk factors. This explains some of the reasons why health care facilities need to be spiritually prepared on a daily basis through prayers and other alternative means. some church ministers who are from the church denominational groups said that they are not necessarily of the abrahamic origin, usually considered locally as sects, perhaps this is because their ideology and activities are less known by others or simply they see them in respect to their religious origin. There are churches that are closely related to christianity but are quite divergent in their doctrine, as well as islamic sects, they seem to live in a different world and adopt an extraordinary lifestyle. This informant explained that, "*some of our church members did not obey god and they went ahead to join sects, they later got infected, most of whom completely ignored any conventional manners of handling it and were taken to the hospital through interventions of neighbors and authorities. It is only when prayed for, health was recovered". (*Interview with informant, 10/06/2018, Melen). From the above declaration, as result of disobedience to god commandment, this patient joined an occult group where he was inflicted with the disease. The second informant said, "*The devil has laboratory to fabricate pathological organisms. Therefore, medications like (statins, aspirin, and calcium channel blockers) can treat it. The extremist's revivals think that; it will be kind of lack of faith to seek for biomedical treatment when we know that god can heal us" (*interview with informant, 10/06/2024, Melen). CVD is said to be a demonic affliction in the spiritual world, they are fabricated to afflict humanity. It is the reason when demons are responsible for CVDs, they are chased out, and patients automatically receive healing or not. Radical Christianity sees demons as the ultimate causes of all illnesses/diseases though many do not completely reject the biological causative perspective. Religious ministers say that the devil can use anything to destroy mankind and exploit any opportunity. There are beliefs that CVDs are produced by evil spirits and sent for a particular mission.

- **Witchcraft and supernatural forces**

From the information's obtained from informants; CVDs is believed to be caused mystical by forces, like ancestors and witches who have mystical forces to cause people to suffer from the disease. This usually occurs when the people of particular ancestors deliberately refused to abide to the norms, costumes, traditions, rules and regulation of an ethnic group. Also, the non-respect of the laws of a given culture will eventually cause the ancestors to inflict mysterious diseases on people through witchcraft. It usually occurs when individuals take part in witchcraft and it latter on affects them. Also, it is believed that when a child is suffering from this disease is a witch or a wizard. Among the ethnic groups interviewed, witchcraft is a social reality that can be managed by persons with the same kind of power and will. It is said to be the capacity for an individual to control natural forces and to influence the lives of others using those forces, thereby, causing the poor state of health of patients. Most of the inhabitants believe that diseases could be caused by supernaturally forces either because of one's wrongs or their parents. Research revealed that, stress, obesity, poverty, diet, lack of exercise, poor health care facilities, tobacco consumption, other illness like chronic arthritis, gender, ethnicity, stigmatization, anger, heritage, age, hard labor and problems are the main caused by these supernatural forces. An informant explained that, "*When you hear that someone is suffering from CVD, just know that supernatural forces and witchcraft is involve. It is mostly caused by witches; they try to eat up the heart of patients. Witches like eating the heart, when they must have done so; that is when people start manifesting symptoms of the disease like; high blood pressure, heart failure, coronary*

arteries; heart pains etc. I was told it is one of my parents the cause of my problem who is into witchcraft. He is responsible for the disease which I am suffering from, he has chopped my heart in witchcraft". (Interview with informant, 25/08/2022, Melen). As mentioned above, heart disease is represented to be a disease which is gotten through supernatural forces and witchcraft. When witches eat up the heart of a patient supernaturally through sorcery, there are bound to be manifestation of the disease like high blood pressure, heart failure, coronary arteries, and heart pains.

- **Curses**

In some communities in Biyem Assi, when people suffer from CVDs, it is often represented to be from curses. This disease is said to come as a result of generational curses which are pronounced on people. When people hear that an individual is suffering from CVD, they say it is not normal. They say it is a disease which runs in some families as a result of curses which have been pronounce on individuals either out of jealousy or atrocity. It usually runs from one generation to another. For example, one can find that grand parents, children and great grandchildren suffer from this right from childhood. "*CVD affects people who do not respect the norms and traditions of their cultures or communities. It is not for nothing that people are told to always go back to their villages to appease their ancestors and breakage of generational curses. If this is not done, there are curses which an individual will likely suffer from".* (Interview with informant, 14/07/2023, Melen). As mentioned above, when people do not respect the norms and traditions of their culture, they are bound to suffer from CVD. It is the more reason people are always told to go to their villages to appease their ancestors and to break generational curses pronounced on their families so as to prevent this form of disease. This informant believes that, anyone undergoing a curse of suffering from CVD does not merit it. Below following presentation. "*In my culture, anybody who suffers from CVDs, it is from curses which are inherited from parents. For example, when we see cases of families such as grandparents suffering from this disease and later on in life their children, grandchildren inherit this deathly disease, is that not a curse?"* (Interview with informant, 23/03/2022, Obili). Based on the above explanations, CVDs is caused by generational curses which are inherited from ancestors. There is the illustration of cases of grandparents, children and grandchildren suffering from this disease. This informant illustrated that, it is a curse. Below is another explanation of the cultural representation.

- **Infliction**

Informants gave their opinion of the cultural representation of CVDs based on their experiences. They mentioned that CVDS is inflicted or thrown on patients by witches and those jealous of their progress in the community. It is not a natural disease which just affects patients like that. Also, it is believed that, it is inflicted on children who are innocent beings, youths and adults who suddenly die from heart attack without any signal. "*There are more than 10 cases of patients suffering from CVD like me, I believe it is not natural disease. This disease is mostly inflicted and thrown on people right from birth. It is meant to punish the patient's family, to make them spend a lot of money on health and treatment. In the course of my illness I happened to visit a native doctor and he said I had been inflicted and thrown this disease on my body by witches from my mother's village".* (Interview with informant, 06/12/2019, Melen). Also, from the above statement, from the 10 cases of people who suffered from this disease, it is believed to be inflicted on people to punish their family and to make them spend a lot of money on health and treatment. He inflicted by witches in his mother's village while he was sick he visited a native doctor and they said he was inflicted

- **Jealousy**

In addition to that, CVDs is provoked by jealousy. It is believed in the African culture that, when an individual is suffering, it is because people do not love seeing others succeeding in their daily activities. Also, the first thought that always comes into their mind is jealousy. Sometimes, it is either they or their children have not attained that level. The following statement was presented by informant interviewed. "*The African man is very wicked, most often jealousy is the main cause of the disease, when there is a lot of envy in the family and community, they will prefer to destroy an individual's health by causing him or her to suffer from CVD, so as to paralyze them from working".* (Interview with informant, 06/12/2019, Melen). Based on the above discussion CVDs believed to be caused by jealousy. This consequently leads to envy, destruction and paralysis of the individual's health. Also, another informant said, "*For me, it is caused by jealousy. It is something which exist in some families most especially when children are succeeding and some of theirs are not succeeding. That is when witches of that family will decide to throw this disease on the child or any other family member. So that it will pain that family a lot. In some families, they read the stars of youths and they do not want them to succeed".* (Interview with informant, 06/12/2019, Melen). It is said to be caused by jealousy especially in some families where there are witches. When they see people succeeding, out of jealousy they might decide to throw CVD on the patient. The aim of it, is to inflict pain on patients and family members.

- **Totems**

Totemism is another form of cultural belief which exist in the community and is responsible for the cause of CVDs. Totem could be an animal which is considered not only as the godfather of the group or the individual, but also as its father. It can be the "boss" or its brother. A clan calls itself the parent of the beer, spider or eagle. Informants made mentioned of the fact that some families have totems like: snakes, elephants,

tigers, snakes, monkeys, hypopothemus etc. some of these totems feed on blood and they are out to make people sick. An informant said: "*when someone experiences CVDS, it is caused by totem, they are known to be spiritual animals".* (Interview with informant, 06/12/2019, Melen). It is culturally represented to be caused by totems which are known to be spiritual animals which some families possess.

- **Deadly disease**

Based on the representation of CVDs, it is believed to be a deathly disease which affects patients. Each year so many people die from health complications like heart failure, hypertension, heart pains and high blood pressure. It becomes chronic when there is high blood pressure, heart failure and heart arteries. It cannot be cured but could only be controlled with drugs prescribed by the medical doctor. When the disease is not diagnosed early enough, it becomes chronic and it consequently leads to death. When patients' experiences crises, and they are rushed lately to the hospital for medical intervention it became so complicated. When much cannot be done to cure the patient it consequently leads to death. Most of the time, when the case gets so critical or gets out of hands, the patient ends up dying because of the severity of the disease, health complications and negligence by relatives or parents. Below is the statement made by an informant, "*CVD is a deadly disease, each day hundreds of people die from this disease, most especially youths. There have been so many reported cases of patients who died after being taken to the hospital for treatment. When it becomes chronic, it leads to partial paralysis, heart attack or heart failure. Today, people are dying from it".* (Interview with informant, 4/10/2021, Melen). From the above declaration, it is a deadly and chronic disease. It is because many people are dying on daily bases from the health complications of CVD in the community. When it is chronic, it results to partial paralysis, heart attack or heart failure.

- **Chronic disease**

Information's obtained from informants proves that CVD is a chronic disease when it becomes so severe. It affects the patient's state of health, consequently leading to severe pains, abnormal heart beats, heart failure, high blood pressure, stroke and partial paralysis on the body. It causes patients to fall sick, to enter to comma and the heart does not function normally as it is normally supposed to be. More also, it is a chronic disease which affects the red blood cells, it causes patients to suffer from pains, and bone. From the findings obtained, this disease is one of leading cause of child mortality and maternal mortality for pregnant women who often experience pre-eclampsia during child birth. It is a chronic disease which so many children, adolescents, youths, adults and the ageing are dying daily from heart failures. This affects the patient's immune systems and antigens.

- **Non-communicable and inherited disease**

From the data collected from the field CVD is cultural represented to be a non-communicable disease. It is not a disease which is gotten from during pandemics. It is not a contagious disease like: STDs, HIV/AIDS, and tuberculosis HCV etc. it is only inherited from parents who are carriers of the disease. But on the other hand, it is believed to be a disease which is transmitted from generation to another right from birth. Below is the following presentation of an informant, "*CVDS are not transmissible diseases which are gotten from people in the community. You know it is only gotten from both parents who inherited the gene. It is a disease which is not gotten through infections neither is it gotten from infected people in the community.* (Interview with informant, 4/10/2021, Melen). From the above statement, CVDs are non-communicable diseases which is gotten from infection. It is only inherited from parents and not from infected members in the community. Another informant said that, "*As for me, I believe that CVD is a non-transmissible disease. It is only inherited from parents who have experience the disease. My children inherited it right from birth. It is not a disease which other people living around can easily get infected.* (Interview with informant, 06/12/2019, Melen). It is mentioned above that, CVD is a non-communicable disease. This disease can only be gotten from parents (mother and father) and no other person. He illustrates the case of his children who inherited this disease from parents and others living around cannot get infected with CVD.

- **Incurable disease**

Furthermore, CVDs are incurable diseases but could be controlled. When an individual suffers from this disease, they cannot be cured with traditional medicine or biomedicine. But, this disease could only be controlled by patients by taking drugs on daily bases drugs as prescribed by the medical doctor. With the improvement in medicine, if CVDs are diagnosed right ahead of time, that is; at the early stage and patients are immediately put on treatment to calm down the crises. This disease does not have a cure but can only be managed. Most individual who have this disease live with it for their entire life. It can be controlled by patients provided they respect the therapeutic interdiction and prescription given to them by their medical doctors so as to improve on their life expectancy. An informant said; "*CVD is a disease which cannot be cured be it traditionally or biomedical. It can only be controlled with drugs prescribed by the doctor".* (Interview with informant, 06/12/2019, Melen). However, it is non-curable disease which can be controlled with drugs prescribed by the medical doctor. An informant here by brings out the following statement: "*I have been suffering from CVD for 20 years; I have taken all types of treatment which people said it will completely heal me from the disease. Nothing changed anything. With my experience it is non-curable disease. It can only be controlled with drugs".* (Interview with informant, 4/10/2021, Melen). From the above

statement, CVDs are non-curable disease. Based on the patient's experience, he had been suffering from CVDs for 20 years and this disease could not be treated because all types of treatment was taken but nothing change.

- **Disease affecting the heart of patients**

Informants mentioned that, CVDs are diseases which affects the heart of patient in the community. It consequently leads to heart failure, heart attack and high blood pressure. It causes patients to feel a lot of pains consequently leading to other health complications. The common form was hypertension and coronary artery disease. We also discovered that diabetes, stress, social cohesion and stroke were other complications related to CVDs. Below, an informant made the following statement: "*It is CVD because it affects the heart of the patient. It can lead to heart attack, heart failure, high blood pressure and other heart problem".* (Interview with informant, 15/01/2022, Melen). In response to the above statement of the respondent, CVDs affects the heart of patients consequently leading to heart attack, heart failure, high blood pressure and other heart problem. An informant said, "*It actually affects the heart of the patient by causing it not to function normally as it used to be. When the heart does not function normally, patients start developing symptoms and health complications.* (Interview with informant, 15/01/2022, Melen). In response to the above statement of the respondent, CVDs are diseases which cause the heart not to function normally like before. It affects the patients consequently leading to symptoms and health complications of the disease.

- **Hypertension as a "Quiet Disease"**

A key theme in Biyem Assi - Yaoundé representations of cardiovascular disease is the idea that hypertension is a "quiet disease." This expression refers to the perception that the illness develops gradually within the body without clear early symptoms and may remain unnoticed for a long time. According to informants, individuals may appear healthy while the disease progresses internally. It is often only during medical screening or after a sudden event such as stroke that the condition is discovered. This understanding reflects a local awareness of the asymptomatic nature of hypertension. However, this perception also contributes to delayed diagnosis and treatment, particularly among younger individuals who assume that they are not at risk. Many community members associate cardiovascular disease primarily with old age, which further reduces early health-seeking behaviour. Thus, while the concept of a "quiet disease" reflects an important empirical observation, it also has unintended consequences for prevention and early detection. Informant mentioned that, CVDs are quiet disease or a silent killer which affects people and killing so many people in the community slowly. At time the symptoms might not manifest itself physically but internally it is eating that patient without them knowing. It is the more reason CVDs are called silent killer. It is partly because someone might be looking very healthy and out of sudden we hear that patient died from heart attack or heart failure. This increases gradually within the individual, and causes unnoticeable damages; it is after a long while, that it is discovered. But then, they have been cases of people with the disease who have never known they had the disease, since CVDs are often referred to as a "quiet disease". An informant said, "*For me, this disease is a silent killer. So many healthy people are dying from heart failure and heart attack. It is killing so many people whom do not even have the symptoms of the disease. It is the worst disease. Better you are sick for a period of time. It is the number one killer today".* (Interview with informant, 15/01/2024, Melen). As mentioned above, CVD is a disease which is generally known to be a silent killer. This is because many healthy people die from heart failure and heart attack. It is killing so many people whom do not even have the symptoms of the disease. "*This is the most dangerous disease in the community. I know of so many people who have died in their sleep during this short period of time. It was due to heart attack or heart failure.* It is a silent killer". (Interview with informant, 20/03/2024, Melen). As mentioned above, CVDs are considered to be the most dangerous disease which is killing so many people in the community. There have been reported cases of people who died of heart attack while they went to bed and were sleeping. For that reason, CVDs are represented to be a disease which does silent killing of individuals in the community. But then, they could still be cases of those with the disease who have never known they have the disease, since CVDs are often referred to as a "quiet disease".

- **Social determinants of Cardiovascular vulnerability: poverty, wealth, and health risk among the Biyem Assi communities- Yaoundé**

Biyem Assi - Yaoundé explanations of cardiovascular disease are strongly rooted in social experience. Informants rarely limited their explanations to biomedical risk factors alone. The study highlights that local explanations of cardiovascular disease extend beyond biomedical risk factors to include conjugal conflict, stress, sudden shock, diet, alcohol consumption, poverty, temperament, and family history which is recognized as an important factor in the occurrence of cardiovascular disease. Informants often describe hypertension as a condition that "runs in the family." This understanding reflects both biomedical knowledge of heredity and local interpretations of inherited vulnerability. Individuals with family members affected by hypertension or stroke are more likely to recognize their own risk and seek medical attention. These factors are embedded in everyday social life and shape both perceptions of illness and patterns of treatment. Both poverty and wealth are perceived as contributing to cardiovascular disease through different pathways. Poverty is associated with stress, poor nutrition, inability to access medical care, and constant worry about survival. Poverty and economic insecurity emerged as

central determinants. Households with limited financial resources often rely on inexpensive, energy-dense, and nutritionally poor foods. Economic hardship also restricts access to preventive healthcare and long-term treatment for chronic conditions such as hypertension. Wealth, on the other hand, is associated with overconsumption, sedentary lifestyles, alcohol use, and dietary excess. This dual understanding reflects a non-linear view of socioeconomic status in relation to health, where both extremes are seen as potentially harmful depending on lifestyle and behavior. Limited access to healthcare services represents another critical factor. Geographic distance, inadequate transportation infrastructure, and the cost of medical consultation and medication contribute to delayed diagnosis and irregular treatment adherence. Educational disparities and health literacy further shape vulnerability. Many participants demonstrated limited biomedical knowledge of cardiovascular risk factors, which affects preventive behaviors and delays care-seeking. Psychosocial stress linked to structural conditions, including land disputes, unemployment, family responsibilities, and social obligations, was consistently identified as a major contributor to cardiovascular strain. These stressors reflect broader processes of socioeconomic transformation affecting rural communities in Cameroon and across sub-Saharan Africa. Collectively, these findings underscore that cardiovascular diseases cannot be understood solely as individual-level pathologies but must be situated within broader systems of inequality and social change.

- **Therapeutic practices and management of cardiovascular disease in Biyem Assi: medical pluralism**

Individuals commonly seek care from multiple sources, including biomedical facilities, traditional healers, and religious institutions. Rather than being mutually exclusive, these systems are often used in combination depending on perceived effectiveness, cost, and accessibility. Healthcare-seeking behavior is characterized by a strong pattern of medical pluralism, involving the simultaneous or sequential use of multiple therapeutic systems. Biomedical healthcare services are also utilized, particularly for symptom management and diagnosis of conditions such as hypertension. However, adherence to biomedical treatment is often inconsistent due to financial constraints, drug availability, and perceived limitations of biomedical care in addressing the social dimensions of illness. A common pattern observed is therapeutic itinerancy, in which patients move between traditional healers, self-medication practices, pharmacies, and health facilities. This reflects pragmatic decision-making rather than rejection of biomedical knowledge. Medical pluralism thus functions as an adaptive strategy that allows individuals to negotiate uncertainty, combine different epistemologies of healing, and respond to the multidimensional nature of cardiovascular illness.

- **Biomedical treatment and access constraints**

Biomedical care is available through hospitals and health centres in the area. However, access to long-term treatment for cardiovascular disease is limited by financial constraints. The cost of monthly medication is perceived as high relative to household income, particularly for subsistence farming families. As a result, some patients interrupt treatment or reduce dosage due to inability to sustain long-term costs. Health personnel acknowledged that treatment adherence is often affected by economic limitations.

- **Traditional Medicine**

Traditional medicine remains widely used for the treatment of cardiovascular disease. Herbal remedies prepared from local plants such as pawpaw leaves, guava leaves, fever grass, and other locally available materials are commonly used. Traditional healers are often consulted either before or after biomedical treatment. In some cases, patients alternate between both systems depending on perceived improvement or financial capacity. Traditional medicine is generally considered more affordable and culturally accessible than biomedical care.

- **Religious and Spiritual Healing**

Religious healing, particularly through prayer, is also an important component of cardiovascular disease management. Many patients combine biomedical treatment with prayer, viewing illness as having both physical and spiritual dimensions. Prayer is not generally seen as a replacement for medical treatment but as a complementary practice that addresses emotional and spiritual aspects of illness.

- **Patterns of Health-Seeking Behaviour**

Health-seeking behaviour in Biyem Assi - Yaoundé is not linear. Patients frequently move between biomedical, traditional, and religious systems depending on cost, perceived effectiveness, and social advice. This flexible approach reflects pragmatic decision-making rather than a strict hierarchy of medical systems.

- **Naming and distribution of traditional health care units in Yaounde**

Generally, names of private healthcare units are culturally and biomedically significant. Be it a naturapath, faith- based or biomedical healthcare centers. Owners of private healthcare units give names that are either related to their family or quarter or something significant in their lives. Healthcare centers in Yaounde attribute names to something that is very significant. *"The name of his health centre is called "Sainte Catherine" and that the name is the name of his grandmother and I am what she wanted me to be, honestly there is no other name that I could have given that is better than this. That is to say she is the one who brought me up and she died without gaining or benefitting much from me. Her death really hurts me and it is the least thing that I can do to remember or honor*

her or to do for her. Even if I succeed to open another health care center it's the same name that I will still give" (Interview with Mofoseen, November, 2024, at Etoug ebe).

Most of the traditional health care operators in Yaounde give a unique and popular name to their health centres. Most health cares which are in charge of selling African traditional medicines put their names and price tags and on their medications. This phenomenon is also common in faith-based institutions that sell anointing oil to their faithful's. They also give out their contacts to their patients. Some go to the extent of doing publicity over local television channels as illustrated in the phrase below. "*The name of my health centre is "produit bio du Sahel" and we do advertisement in some local TV stations. Some of the names reflect the kind of services they provide to their patients"*. (Amina, herbalist opposite GP Melen, May 24, 2024).

What motivated her to give the name was the fact that she deals with bio medical products and she is from the northern part of Cameroon. All the products that she is selling are coming from the North "Grand Nord du Cameroon". She is trying to valorize them and make it known to all. For her, there are riches in Africa. It is good that we consume African products. The Sahel that she is talking about is as from Adamawa, Garoua-Maroua.

In case of distribution of products, what she does with her collaborators as she will prefer to call them, is that each morning they check their status and if there are shortages or high demands for some products they now tend to look for immediate means to stock or replace what has been in demand from other sales points that are available. *"When talking of mediation, it is always good to function 24/24 because they are always cases of emergencies or a complication that they will need your intervention. At times they work through phone calls. They are always available because it is their job and they have to honor it"* (interview with Ahmadou, Herbalist opposite GP Melen, May 24 2020). Digitalizing the medical system is also a good proposition according to the naturopath because if they permitted or facilitate their usage of such innovation it will also help them because their products can also be made known out of their neighborhood and out of Cameroon. Also, because many patients can easily access their products through websites. But when somebody says she or he knows a particular product and does not know where she bought it, becomes a problem but with the digital system, it is much easier. Most of them are still at the level of sensitizing the population about their products. Thus, they have not yet started treating patients in their health centers.

- **Faith Based Health System**

Faith-based health systems is very much practiced in hospitals and in the community, organized with non-profits. It is usually affiliated with religious groups and inspired by religious beliefs. But at times it is not legally recognized by the public. They serve at times as alternatives to health insurance. Faith healing is a form of health care for patients. Characteristics of faith healing practices in a biomedical setting during consultations are prayers, sharing of the word of God and singing songs of praise. It is believed that; through that mystical powers of healing are released and the Supreme Being comes first. Thus, faith-based health care is a way of treating an illness through belief or faith instead of medical method. It is often practiced through prayers to the Supreme God. Faith-based medical institutions are mostly religiously oriented and practice medicine. Also, they act as an alternative to healthcare policies or insurance in the health domain. Some informants goes further by saying; "*The ones that I know are those at Etoug Ebe, "handicap Center" are also owned by the Catholics because I used to hear something like the saint Therese clinic hall which is found at the center. Faith based medical institution organize prayers for their patients. But what I know is that most of these churches around practice faith healing. Some have even opened their churches like the Presbyterian Church at Simeyong*". (Interview with informant, 10/06/2018, Etoug Ebe).

Faith-based health care is a religious-oriented alternative to standard health care. Health care sharing institutions or actors offer faith-based plans that operate with exemptions from the mandates of the affordable care that is out of an individual's care, family or community care. Another informant explained that *"People come here because they are treated at times free of charge, payment is done after treatment, there is a sense of sympathy or because they are members of the Church that owned the hospital, and because the health workers belong to the same faith with the Christian"* (Interview with informant, 18/05/2020, Melen). From the above illustrations, it is seen that many patients go for treatment at faith-based health care units because spiritual treatment is free and biomedical services are cheaper as compared to other hospitals. At times, patients can pay their bills after receiving treatment. The next informant said: "*A faith-based organization is a group of individuals united on the basis of religious or spiritual beliefs of divine healing obtained from God. They have directed their efforts towards meeting the spiritual, social and cultural needs of their members.* (Interview with informant, 18/05/2020, Melen). Faith based institution, is any institution that relies on beliefs in a particular supreme being for healing. As such, it is often seen through religious institutions. Their practices can vary from one religious' institution to another. Informant said, *«The use of Rosery, cross, holy water, olive oil, bible, stickers, bread for communion to treat diseases in faith base health system. (*Interview with informant, 09/07/2018, Etoug Ebe). There is the use of amulets like Rosery, cross, holy water, olive oil, bible, stickers, bread for communion in some faith-based institutions; it is

often used during prayers in the hospital. Below is the presentation of a picture.

From observations, there is a constant increase of faith-based health care institutions in the community and this is classified into the following; catholic, protestant, Baptist; other religious groups health, and private faith- based health care structures. The private faith-based institutions are operated by pastors, Muslims, evangelists, apostles. (Those who believe to have the gift of healing inspired by a religion. The catholic and protestant faith-based health care institutions, out-number the private faith-based institutions in terms of quality of services to meet the needs of their patients who are of the same faith.

Christian faith-based health care providers play a substantial role in the health systems in Biyem-Assi in Yaounde. People of different ethnic groups believed that, there is the existence of the Supreme Being. However; based on the healthcare facilities, this is said to have an impact on the people's health systems. This section seeks to understand the beliefs, practices, concepts of deaths, witchcraft and various taboos that have deep religious connotations as well as the changes that have occurred in the health and belief system.

The God concept is the same as in our traditional religion as in most Christian dominated groups in our research site. Let us look at the concept in the form of a triangle. The apex in the triangle represents the Supreme Being, God. On the left side of the triangle, let us give it to the non-written religions. Indeed, the two sides should be designated thus; the left side is reserved for the conceptual religions and the right side for the textual religions. To others "*your simcard is like your belief system*". According to exchanges we had with informants in the community, various sources of faith-healing powers are used by religious ministers for the treatment of patients. Faith-healing powers comes from the Supreme God/Being, Holy spirits, Holy Mary and the saints. These points are going to be elaborated below.

- **Supreme God/Being**

From discussion with religious leaders and patients, for the treatment of CVD patients, healing power is obtained from the supreme God. It is believed that when these patients serve God in spirit and in truth they can get well. Also, if patients have faith in God, they can obtain healing only from God and no other person. Below is a brief presentation of an informant. *"CVD is treated by the Supreme God, the Supreme God has mysterious healing powers. religious leaders receive power from the Supreme Being to pray for the sick and they get healed., supernatural powers have been given then to anoint patients, prophesy, wash their feet's and cast out demons."* (Interview with informant, Yaoundé, 12/09/2021). From discussion with this religious leader, it is believed that supernatural powers come from the Supreme God to treat patients of mysterious diseases. There are supernatural powers of healing which are released when patients are anointed, prophesied, delivered from demons and their feet's washed. The second informant affirms that. "*Spiritual or religious leaders are instrumentalists of God whom have been placed and ordained by the Supreme God in their lives. These men of God serve as points of contacts for their healings of CVD and other health complications. This supreme God is believed to be ultimate healer of chronic diseases no matter the state and complications of the disease. He has supernatural powers which cannot be explained."* (Interview with informant, Yaoundé, 21/07/2020). This patient mentioned above that, religious leaders are instruments of God for faith-healing. They were chosen by the Supreme God for their sake and they serve as points of contacts for their healings. This supreme God is greatest healers of all disease no matter the severity of the disease. Therefore, it could be concluded that, faith-healings powers came from the supreme God.

- **Holy spirit**

On the other hand, informants interviewed in the community explained that, one of the sources of faith-healings power is from the holy spirits. Those from the Roman Catholic and Pentecostal church believed that, the Holy Spirit has a role it plays in the healing of patients. It is invoked during exorcism, worship, deliverance sessions, praises and prayers (These are also health facilities in the faith health system) for the sick. They are called to take control and to heal patients suffering from CVD. Below is a brief presentation of an informant. *"…During exorcism and prayers, the Holy Spirit is invoked to take control, to heal patients suffering from CVD. During prayers sessions, there are prayers which are meant for the Holy Spirit to come down and take control of the situation which is found in their hands. The holy spirit has powers which comes from God to do and to undo."* (Interview with informant, Yaounde, 12/01/2022). This informant explained that, the Holy Spirit is called upon when exorcism and prayers are going on. During prayers session, there are prayers which are meant for the Holy Spirit to come down, to take charge of the situation which is found in their hands and for healing. It has a role it plays in the healing patients. It is believed that, the Holy Spirit has supernatural powers which comes from the Supreme Being. The second informant mentioned that; *"Since I am a catholic, I know the holy spirit has healing powers because whenever we are praying in our charismatic group or during exorcism, we always call on the holy spirit to intervene in the healing of the patient who are suffering from chronic diseases. The holy spirits have supernatural powers and it has a role it plays in healings."* (Interview with informant, in Yaounde, 29/07/2024). In corroboration with the above presentation, the Holy Spirit is believed to have supernatural powers to heal. Being in the Roman Catholic Church, whenever they pray in their charismatic group or exorcism, the Holy Spirit is always called for to

intervene in the healing of patients suffering from chronic diseases as cardiovascular disease. It is the more reason people must be filled with the Holy Spirit to pray for patients for them to get well. Therefore, it could be concluded healing power comes from the Holy Spirit.

- **Holy virgin Mary and the Saints**

Following discussions with informants in the community, Virgin Mary and other saints are believed to have supernatural powers to heal patients when consulted for healing. They are considered as ancestors who longed died, they play the role of intermediaries between the living and the death. *"Prayers are made calling the name of Holy Mary and the saints for healings like; Saint Jude, Saint Thomas etc. They have healing powers to cure CVDs. Special Prayers of healing are lifted up to Virgin Mary and the Saints for them to intervene, to transmit this message and to plead the supreme God for healings."* (Interview with informant, Yaoundé, 20/08/2024). Prayers of healing are lifted up to the saints and to Virgin Mary to intervene in the healing of the patient. Also, they are told to transmit their messages and to plead with the supreme God for healing. Therefore, it could be concluded that faith healing powers used to treat CVD patients comes from Holy Virgin, Mary and saints like; Saint Jude, Saint Thomas etc.

- **Traditional Health Systems**

Traditional health system is practiced in the community with the modern form of treating patients traditionally and with the recognition of medications by the government. There are traditional clinics where patients go for consultation; treatment and drugs are being sold there. This is so because members of the community have also accepted that African traditional medication is effective. Others use the district hospitals before and after taking traditional medication. The health districts are often used for laboratory test to know the state of their health status, for example, Blood Pressure level. After that; patients go to the clinic for health care services. People of different ethnic groups in the Biyem Assi community belief in traditional gods which are represented by their ancestors or fore fathers. Here, a person visits the village priest who is believed to be the bridge between them and the spirit world. He often implores the gods to help his cardiovascular parents. In the same light, the village ancestors are believed to be keeping an eye on the family members, especially protecting them from enemies, diseases and other environmental evil doers.

- **Conjugal conflict and emotional betrayal**

One of the most frequently cited causes of cardiovascular disease is conjugal conflict, particularly marital betrayal, infidelity, neglect, and breakdown of trust within marriage. Informants consistently linked emotional distress arising from marital problems to the onset of hypertension.

In local explanatory logic, emotional suffering caused by betrayal is believed to accumulate in the body and eventually affect the heart. Several narratives described situations in which individuals experienced intense emotional shock following discovery of infidelity or breakdown of marital relationships, after which symptoms of hypertension or collapse were diagnosed. These accounts illustrate a culturally grounded belief that unresolved emotional pain can translate into physical illness, particularly affecting the heart as the centre of emotional life.

- **Stress as Social and Economic Pressure**

Stress is widely recognized in Biyem Assi - Yaoundé as a major cause of cardiovascular disease. However, it is understood not only as a psychological condition but as a social experience linked to economic hardship, family responsibility, and life pressures. Informants associated stress with inability to meet household needs, lack of financial resources, conflicts within the family, and continuous worry about children and survival. Women, in particular, were described as bearing significant stress due to their central role in household maintenance and caregiving responsibilities. Stress is therefore understood as cumulative. It builds over time through repeated exposure to social and economic difficulties until it reaches a point where the body can no longer cope.

- **Sudden shock and life events**

Another commonly cited cause of cardiovascular disease is sudden shock. This refers to unexpected and emotionally intense events such as death of a loved one, accidents, job loss, or serious family conflict. Unlike stress, which is gradual, shock is understood as immediate and overwhelming. Informants reported that such events can cause immediate physical collapse or trigger the onset of hypertension. This explanation reflects a belief in a direct connection between emotional intensity and bodily response, particularly affecting the heart.

- **Diet and everyday consumption practices**

Diet is also identified as an important factor in cardiovascular disease. Foods commonly associated with risk include fatty meats, excessive salt, palm oil-based meals, and fermented palm wine. However, dietary practices are not understood purely in nutritional terms. Food is deeply embedded in social and cultural life. Many of the foods considered risky are also central to ceremonies, social gatherings, and family events. This creates a tension between cultural obligations and health concerns. In many cases, individuals consume these foods not out of choice but because they are socially required or economically available. The increasing presence of processed foods in local markets has also introduced new dietary concerns related to fats, sugar, and preservatives.

- **Alcohol consumption**

Alcohol, particularly palm wine and locally available beer, is widely identified as a contributor to cardiovascular disease. Informants reported that frequent and heavy consumption of alcohol can lead to weight gain, high blood pressure, and general deterioration of health. Alcohol consumption is also socially embedded in rituals, celebrations, and community gatherings, making it a normalized aspect of social life. This social acceptance complicates efforts to reduce consumption for health reasons.

- **Temperament and emotional disposition**

Individual temperament is also considered a factor in cardiovascular disease. Persons who are easily angered, emotionally reactive, or prone to persistent worry are believed to be at higher risk. This reflects a cultural belief in the connection between emotional regulation and physical health, particularly the heart. Chronic anger and emotional tension are seen as weakening the body over time.

- **Gendered distribution of cardiovascular disease**

Hospital records and qualitative data from the Biyem Assi Health District indicate a higher reported prevalence of cardiovascular disease among women compared to men in the Biyem Assi - Yaoundé community. This pattern was confirmed across interviews with health personnel, patients, and traditional healers. While global epidemiological literature often reports higher cardiovascular risk among men, the Biyem Assi - Yaoundé case presents a different pattern that requires social and cultural explanation rather than biological reductionism alone. The findings suggest that gendered social roles and structural conditions significantly shape exposure to stress-related cardiovascular risk. The Biyem Assi - Yaoundé community is organized under a matrilineal system of kinship in which descent is traced through the female line. Although this system confers certain social positions to women, it also places significant responsibilities on them in relation to both natal and conjugal families. Women are primarily responsible for household food provision, childcare, agricultural labour, and caregiving during illness. In addition, they often carry emotional responsibility for maintaining family cohesion during periods of crisis. Informants consistently described women as being more exposed to chronic stress due to these multiple obligations. Health personnel noted that women "carry the burden of the family," which increases emotional strain and contributes to hypertension. Thus, the matrilineal system, combined with economic hardship and limited institutional support, produces a structural condition of sustained stress that may increase cardiovascular risk among women.

- **Conjugal vulnerability and emotional stress**

Conjugal relations also play an important role in explaining gendered differences in cardiovascular disease. Women frequently reported emotional distress linked to marital conflict, including infidelity, neglect, financial insecurity, and polygamous household tensions. Such experiences were often described as major life stressors that precede the onset of hypertension. In several cases, women associated diagnosis of cardiovascular disease with moments of emotional breakdown following marital crises. These narratives suggest that emotional vulnerability within conjugal relationships constitutes an important dimension of cardiovascular risk among women in the community.

- **Hypertension between biomedical and local understandings**

Biyem Assi - Yaoundé understandings of hypertension reflect a combination of biomedical knowledge and local interpretive frameworks. Some informants defined hypertension in biomedical terms, referring to blood pressure measurements and clinical diagnosis. These respondents often described the condition as blood pressure exceeding normal levels and emphasized the importance of hospital diagnosis. Other informants, however, described hypertension in more experiential and socially grounded terms. It was frequently associated with persistent headaches, dizziness, body weakness, fatigue, and a general feeling of heaviness in the body. In some cases, it was described as a condition caused by "too much thinking," referring to emotional overload, worry, and prolonged mental distress. These variations do not indicate contradiction but rather reflect the coexistence of multiple explanatory models within the community. Biomedical explanations acquired from hospitals exist alongside indigenous understandings that link bodily illness to emotional and social life.

DISCUSSION

The findings of this study highlight the complex interplay between cultural representations, social determinants, and healthcare practices in shaping cardiovascular disease experiences among the Biyem Assi - Yaoundé. From a theoretical perspective, the results strongly support Arthur Kleinman's (1980) concept of explanatory models, demonstrating that illness is culturally constructed and embedded in social meaning systems. Cardiovascular diseases are not understood as purely biological dysfunctions but as phenomena deeply connected to emotional suffering, social relationships, moral order, and spiritual balance. At the same time, global health research underscores the importance of addressing structural determinants such as poverty, inequality, and healthcare access (Bann *et al.,* 2024). The prominence of stress and social conflict as causal explanations aligns with research conducted in other African contexts, where hypertension is frequently described as a "disease of worry" or "disease of thinking too much" (De-Graft Aikins, 2020; Mendenhall *et al.,* 2022). These findings suggest that emotional distress is not only a perceived cause but also a lived reality shaped

by structural inequalities. This article also confirms the importance of the nutrition transition framework, as described by Popkin (2022), in explaining the rise of cardiovascular diseases in low- and middle-income countries. Dietary changes associated with globalization and market integration are perceived locally as a decline from "traditional" dietary norms, reinforcing cultural narratives of health loss and social transformation. From a development anthropology perspective, cardiovascular diseases emerge as both a health outcome and a development indicator, reflecting broader processes of poverty, inequality, and structural change. The strong association between socioeconomic insecurity and cardiovascular risk highlights the limitations of biomedical approaches that focus exclusively on individual behavior modification. Awah, and al. (2008) carried out a study which revealed an awareness of emergence of CVD and diabetes in Cameroon and perceived relationships between risk factors and diabetes. We used concepts taken from theories of disease causation in medical anthropology and structuralism in order to analyse the relationship of health systems and heart disease in Yaounde. The awareness of behavioral risk factors was more than the biological factors though perception about them was muddled. They also pointed out that the main drawbacks for reducing risk factors were perceived from the lack of a national policy program on non-communicable diseases; and the low level of awareness of the need to reduce these risk factors. They emphasized on the need for health care providers to fulfill the role of health promotion.

The concept of social determinants of health emphasizes the conditions in which people are born, grow, work, live, and age. These conditions profoundly influence health outcomes and contribute to inequalities in disease distribution. Recent research highlights the importance of socioeconomic status, education, employment, housing, social support networks, and healthcare accessibility in shaping cardiovascular health outcomes (Bann *et al.,* 2024; Teshale *et al.,* 2023). Individuals occupying disadvantaged social positions are more likely to experience higher exposure to cardiovascular risk factors and lower access to preventive and curative healthcare services. In Biyem Assi health District settings, structural barriers such as geographical isolation, inadequate healthcare infrastructure, poverty, and limited health literacy exacerbate cardiovascular risks. These challenges underscore the need for context-specific approaches that address the social and economic dimensions of health. Cardiovascular diseases have increasingly become a major development concern in low- and middle-income countries. Beyond their health consequences, CVDs generate substantial social and economic burdens, affecting household livelihoods, labor productivity, and national healthcare systems. Recent studies indicate that more than three-quarters of global cardiovascular deaths occur in low- and middle-income countries (WHO, 2025). In sub-Saharan Africa, rapid urbanization and changing lifestyles have accelerated the emergence of cardiovascular risk factors. Dietary transitions characterized by increased consumption of processed foods, sugar, salt, and saturated fats have contributed significantly to rising rates of hypertension and obesity (Popkin, 2022). From a development perspective, cardiovascular diseases are closely linked to structural inequalities. Individuals living in poverty often face limited access to healthcare, inadequate nutrition, poor living conditions, and heightened exposure to psychosocial stressors. Consequently, cardiovascular vulnerability is not merely a matter of individual behavior but also reflects broader socioeconomic and political processes. Medical anthropology provides a valuable framework for understanding how communities interpret illness and respond to health challenges. Arthur Kleinman's concept of explanatory models emphasizes that individuals construct culturally meaningful understandings of disease causation, symptomatology, and treatment. Within many African contexts, cardiovascular illnesses are often interpreted through culturally specific frameworks that incorporate emotional suffering, social conflict, spiritual imbalance, and supernatural influences. Such interpretations coexist with biomedical knowledge and shape patterns of therapeutic decision-making.

Research conducted in Ghana and other African countries demonstrates that hypertension is frequently associated with stress, excessive worrying, family conflicts, and economic hardship rather than solely with physiological mechanisms (De-Graft Aikins, 2020). These findings suggest that cardiovascular diseases should be understood as both biological and sociocultural phenomena. The findings of this study show that cardiovascular disease in the Biyem Assi - Yaoundé community is understood not only as a biomedical condition but also as a socially embedded illness shaped by everyday experiences, relationships, and structural conditions. Local explanatory models link cardiovascular disease to emotional distress, conjugal conflict, economic hardship, sudden life events, and dietary practices. These explanations reflect a broader cultural understanding in which the heart is seen as the centre of both emotional and physical life. The study also demonstrates that illness experiences are shaped by gendered social structures. Women are disproportionately affected due to the combined pressures of household responsibility, economic insecurity, and conjugal vulnerability within a matrilineal system. These findings support the view that non-communicable diseases such as cardiovascular disease cannot be fully understood outside their social and cultural contexts. Biomedical explanations alone are insufficient to capture the complexity of local interpretations and lived experiences of illness.

Finally, the persistence of medical pluralism demonstrates that healthcare systems in rural Cameroon

are best understood as plural and negotiated spaces of care**,** rather than binary oppositions between tradition and modernity. This has important implications for public health interventions, which must engage with local therapeutic systems rather than attempt to replace them. The literature demonstrates that cardiovascular disease in Biyem Assi must be understood as a biosocial phenomenon, shaped by the interaction of biological processes, cultural meanings, and structural inequalities. A key gap in the literature concerns rural populations, particularly in Cameroon, where empirical anthropological studies remain limited. This underscores the need for more context-specific research that integrates ethnographic insights with public health approaches.

CONCLUSION

This article examined the cultural representations and social determinants of cardiovascular diseases among the Biyem Assi - Yaoundé of Centre Region-Cameroon. The findings demonstrate that cardiovascular illnesses are understood through a multidimensional framework that integrates biological, social, emotional, moral, and spiritual interpretations. Social determinants such as poverty, limited access to healthcare, educational disparities, dietary transitions, and psychosocial stress play a central role in shaping cardiovascular vulnerability. These factors are embedded within broader processes of socioeconomic change affecting rural communities in Cameroon. The study also highlights the importance of medical pluralism, showing that individuals actively combine biomedical and traditional therapeutic systems in managing illness. This reflects pragmatic and culturally informed health-seeking strategies. In conclusion, cardiovascular diseases among the Biyem Assi - Yaoundé are not merely medical conditions but complex social phenomena shaped by intersecting cultural meanings and structural inequalities. Addressing them effectively requires an interdisciplinary approach that bridges medical anthropology, public health, and development studies. Future research should focus on rural populations, local health systems, and the integration of traditional healers into cardiovascular disease prevention strategies.

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