

# Health Awareness: A Significant Factor in Chronic Diseases Prevention and Access to Care

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## Abstract

Health literacy and awareness are essential strategies in promoting global health and improving access to care. While seen as an essential tool for promoting population health awareness to improve early detection and treatment of chronic diseases, it is yet to be emphasized in most African countries. Health literacy is an essential practice to promote chronic disease prevention and reduce the growing threat to population health. Incidences and mortalities from chronic diseases commonly arise from limited knowledge of the causative risk factors and access to health facilities. Without knowledge about causes, health impacts, and available health services, people continue to indulge in the habits that worsen their health conditions and fail to access care timely. By using health literacy and awareness as a tool for chronic disease prevention, healthcare professionals will develop strategic health awareness programs that fit the socio-demographics of the population they serve. This article explored the significant role health awareness occupies in individual and community health prevention through health promotion and education. It reviewed the concept and dimensions of chronic disease prevention, cultural beliefs and impact on chronic diseases, gaps created by low health literacy, and the significance of health literacy in disease prevention and health promotion. Furthermore, it recommends that health systems and local communities form partnerships to address common and emerging health problems, and health systems should be properly funded.

## Keywords

Health Awareness, Health Literacy, Chronic Disease Management, Preventive Health, Health Education

## 1. Introduction

Chronic diseases, otherwise referred to as non-communicable diseases are dis-

ease that lasts for a long time, usually 1 year and over, and requires regular medical attention or clinic activities [1]. Chronic disease cannot be prevented by vaccinations or cured by the use of medications. Non-communicable [NCDs] or chronic disease conditions are on the rise and have become a major challenge to global health [2] [3]. This is demonstrated in the World Health Organization [4] report:

1) 41 million people die each year from chronic diseases, representing about 74% of all deaths globally.

2) 77% of the deaths are in low- and middle-income countries.

3) Cardiovascular disease account for most deaths, followed by cancers (9.3 million); chronic respiratory diseases (4.1 million), and diabetes (2.0 million).

4) Tobacco use, physical inactivity, harmful use of alcohol and unhealthy diets are risk factors from death from chronic or NCDs.

In the United States, 60 percent of Americans had at least one chronic condition, and 40 percent had multiple chronic conditions [5]. Chronic health conditions which were thought to be peculiar to developed countries have now become a serious health threat to low-income countries [2]. Chronic diseases are preventable and can be easily treated with early screening and diagnosis, however, lack of awareness and limited access to health services pose a serious threat. A study in Isu Local Government Area of Nigeria, to assess community access to local health services, Chimezie [6] found that most elderly men and women did not use primary healthcare services or seek care for diseases because they were unaware of the available services at the primary health centers or the health consequences of their disease. Certain public health issues in Africa necessitate the need for health literacy to address African chronic health problems.

In African countries, there are still constant episodes of infectious diseases and increasing incidence of chronic diseases which put pressure on the weak health system and diminish people's quality of life. Consequently, Africans are faced with the double burden of disease [7] [8]. Faronbi *et al.* [9] found that chronic illnesses are prevalent in Nigerian among older people and significantly influence their health-related quality of life [HRQoL].

Another reason is cancer. Cancer deaths and incidences are on the increase globally. Deaths from cancer increased with relation to the available medical facilities and socioeconomic factors that restrict access and response to treatment [10] [11]. In sub-Saharan Africa, 801,392 new cancer cases and 520,158 cancer deaths were estimated to have occurred in 2020 [12]. Among men, prostate cancer is very common. The National Cancer Institute, states that African men are mostly two times more likely to die from prostate cancer than other races. The World Cancer Research Fund International [WCRF] [13], reported that more than 1.4 million new cases of prostate cancer occurred in 2020. It further showed that there is more incidence of prostate cancer in Western countries such Ireland, (4503); Sweden, (10,949); France, (66,070), etc., than deaths, as more deaths occurred in Black populated countries which were not on the list with more new cases of prostate. For example, the following number of deaths occurred in these

countries: Dominican Republic, (2228); Cote d'Ivoire, (1600); Haiti, (1533); Zimbabwe, (868); Jamaica, (844), etc. [13]

Another health threat is cardiovascular disease [CVD]. CVDs, which often result from lifestyle choices, pose serious threats to health globally. WHO [14] reported that estimated 17.9 million people died from CVDs in 2019, out of which 85%, represented heart attacks and stroke, and over 75% of the deaths happened in low-and middle-income countries. In Ghana hypertension is the second leading cause of outpatient morbidity in adults 45 years of age [8]. Ezejimofor *et al.* [15] found hypertension to be a major health problem in the Niger Delta, Nigeria, and a major global driver for cardiovascular diseases. However, scientific research has shown that CVDs can be prevented if the risk factors such as (tobacco use, alcohol abuse, physical inactivity, unhealthy dieting, etc. are addressed early enough through behavior modification and health awareness.

In view of the above threatening chronic health conditions and the challenges posed to the already dysfunctional health system, there is a need for health literacy as way to minimize risk factors and deaths. This practice is efficiently used in developed countries to address the growing challenges of chronic diseases. Such an approach potentially saves lives, minimized stress on the health system, improves patients' wellness, and saves healthcare expenditure on long-term chronic disease cares. Health literacy closes the gap in health inequities as it empowers people to demand that their government provide adequate health and social infrastructure [16] to improve their overall health and wellbeing.

## 2. Literature Review

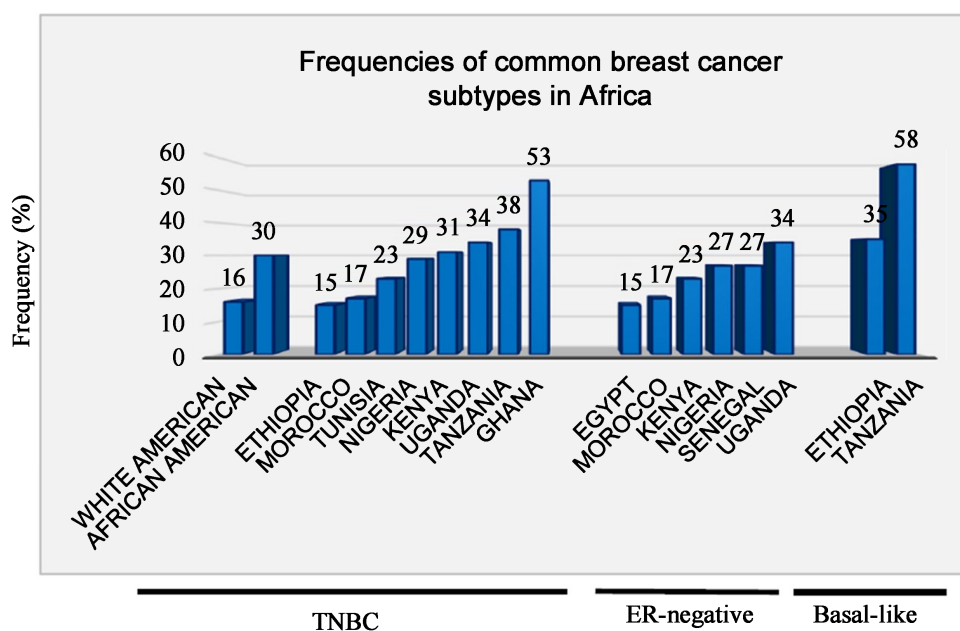
Lots of literatures exist on the importance for health systems to fully embrace health literacy as a preventive practice in healthcare delivery. Disease prevention is very critical in modern healthcare delivery and any attempt to engage patients or communities in preventive process will be a worthwhile project. This is so true in Africa where the burden of infectious and chronic health diseases is posing great challenges to people's health, wellbeing and productivity. The African region is prone to infectious diseases and has very weak health infrastructure to address the threat to global health security [17]. Infectious diseases like malaria, cholera, dengue, meningitis, Rift Valley fever, Avian flu, and hepatitis C & E, anthrax, measles are still common in Africa [17] [18]. Often due to the panic and fear associated with infectious diseases, much of human and financial efforts are expended to tackle it unlike chronic diseases which do not attract such public fears to non-public health professionals.

Cancer disease, for example, is a health threat in high, middle, and low-income countries. In the United States, with more efficient health system than any country in the sub-Saharan Africa, 1,918,030 new cancer cases and 609,360 cancer deaths were projected to occur in 2022, including approximately 350 deaths per day from lung cancer, the leading cause of cancer death [11]. Also, the African Health Organization [AHO] [19] (2019), reported that 72,000 new cases of cervical can-

cer occur in African each year. Cervical cancer is a transmitted sexually by human papillomavirus [HPV]. Breast cancer also, is a danger to women's health. Breast cancer, ranked the most common cancer worldwide, increased from 1.7 million incident cases in 2005, to 2.4 million cases in 2015 [20]. Lukong *et al.* [21] stated that breast cancer is the common among African-American women, with an estimated 30,700 new cases and about 6310 deaths anticipated in 2016. And also that triple-negative breast cancer (TNBC) subtype tends to be frequent in women of African ancestry. **Figure 1** below shows frequencies of TNBC cancers in African and African women compared with White American population. The danger is that in sub-Saharan Africa, about 80% of breast cancers are diagnosed at late stages (stages III or IV) compared with 15% in high-income countries [19] [22]. For example, in Ethiopia, with 27.19 million women, only 0.6 were screened every 3 years [23]. This explains the gap in knowledge and access to health facilities.

According to Healthy People 2030 [24], getting preventive care reduces the risk for diseases, disabilities, and death. Van da Heidi *et al.* [25] stated that health literacy plays a crucial role in chronic disease management. Giving patients information about their diseases and care and empowering them to ask questions to their providers is a sure way to create communication and get a feedback. So when a patient is empowered, informed, and put in-charge of his/her care, good results usually occur [26] [27].

Essentially, public health functions to promote policies, systems, and overall community conditions that enable optimal health for all and seek to remove systemic and structural barriers that have resulted in health inequities [28] [29].



Source: Lukong *et al.* [21] (2017): p. 353;

<https://link.springer.com/content/pdf/10.1007/s10549-017-4408-0.pdf?pdf=button%20sticky>.

**Figure 1.** Frequency of common breast cancers subtypes in Africa.

Therefore, health systems should provide health literacy always for the community to understand chronic disease risk factors, and develop positive attitude to accessing preventive health services.

In the rest of this review, the author will explore the concept and dimensions of disease prevention, the role of health literacy in chronic disease prevention, and constraints to implementing health literacy programs in a health system.

### **1) Concept and Dimensions of Chronic Disease Prevention**

Chronic disease prevention is based on the fact that diseases can be prevented and that prevention is more effective than medications and long term care. Prevention promotes good health and minimized risky health behaviors. Caring and managing chronic disease conditions are very demanding for the patient and results in huge recurring costs to the health system. Therefore, health systems need to understand and practice disease prevention approaches in order to protect both the community and the health system.

#### *Chronic Disease Prevention Strategies*

Disease prevention falls under the following categories ([30]: p. 340)

(i). *Primordial prevention*: primordial aims at establishing and maintaining conditions that minimize health risk factors. (ii). *Primary prevention*: Reduces the incidence or emergency of the disease, (iii). *Secondary*: To reduce prevalence of disease by shortening its duration; (iv). *Tertiary*: To reduce number and/or impact of complications.

Stein [31] a clinical advisor with Lark Technologies, a company that focuses on health prevention; states that: chronic disease prevention is important because: (a) treatment is expensive, (b) the diseases are largely preventable, and (c) prevention is feasible and simple.

Preventive care is essential in public health practice and should be emphasized at all levels of chronic disease care. However, it is very essential at the primordial and primary levels. Chronic disease prevention falls under four domains [32]: epidemiology and surveillance, environmental approaches, healthcare system intervention, and Community programs linked to clinical services. These domains when executed by the health system works simultaneously to link communities to health care efforts by addressing behavioral health risk factors in relation to disease prevention, control, and management of chronic diseases or multiples of them. Specifically, each domain fulfils a very significant function:

a) Epidemiology and surveillance—systems used to track chronic diseases and their risk factors.

b) Environmental approaches—changes in policies and physical surroundings to make the healthy choice the easy choice.

c) Health care system interventions—improvement in care that allow doctors to diagnose chronic diseases earlier and to manage them better.

f) Community programs linked to clinical services—those that help patients prevent and manage their chronic diseases, with guidance from their doctor.

Educating the community on chronic disease prevention is a community-wide approach to adopt a healthier lifestyle jointly pursued by the health department

and community stakeholders, schools, and government agencies to ensure not only healthy and safe population, but also a healthier environment for all to reside [33].

When a health system implements these four dimensions, it will generate data relevant on population and environmental health, set priorities, assess health facility and staff readiness, and plan an outreach to the community to address the health problems before inceptions.

## 2) Health Literacy and Awareness

Often people refer to literacy as the ability to read and write; and awareness as the quality of being aware or conscious of something. In any case, literacy can help one to develop awareness. Also, people can be aware of something when they are told, informed, or read about it. With health literacy, people's ability to access health care services, understand health-related information, and partner with clinicians in making health care decisions, can be affected [34] [35]. There are other types of literacy like digital literacy which has to do with accessing and understanding health information via electronic sources; and numeracy, which enables people to understand nutritional information and interpreting sugar or blood level readings [35]. These are means of creating awareness of health conditions and promoting knowledge.

Health awareness happens at both the individual/community levels and at the organizational or system level. Kaur [36] described health awareness [literacy] as the general understanding and knowledge about health, healthcare and its services, health needs, diseases, and preventive measures. He stated that health information is essential for maintaining good health, preventing diseases as well as making sound health decisions. Purtle & Roman [37] described awareness as the first step in the change process and a useful strategy in preventing mental, infectious, and chronic health conditions. Health awareness has been defined in terms of personal and organizational literacy [34] [35]. By personal health literacy, it refers to the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others. Betterham *et al.* [38] states that "health literacy' refers to the personal and relational factors that affect a person's ability to acquire, understand and use information about health and health services" (p. 1). Organizational health literacy, therefore, have been described as the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others [34] [35].

Furthermore, Van da Heide *et al.* [25] states that health literacy represents the interaction between patients/citizens and health-care systems, organizations, and professionals. According to the authors, there is a link between health literacy and chronic disease management which if understood will facilitate the development of comprehensive health literacy and interventions programs. Thomas Edison (1847-1931) said "*The doctor of the future will give no medication but will interest his patients in the care of the human frame, diet and in the cause*

*and prevention of disease.*” In the biblical era, Prophet Hosea declared “My people are destroyed for lack of knowledge...” (Hosea 4:6). Disease prevention starts from health education as people begin to recognize and avoid disease risks, practice healthier behaviors and make informed health decisions [39]

### **3). Significance of health literacy in Chronic Disease Care and Prevention**

Health literacy or awareness is important for the following reasons:

a) It helps in disease prevention; promotes risk-factor control and empower patients and communities to make informed health decisions. People who are uneducated or lack health awareness can be sick without realizing it and not avail themselves of medicines or health services even when available. Patients and communities can take charge to modify behavior or adhere to medication and care process when doctor-patient communications about their diseases improve [40] [41]. Merck Pharmaceutical’s Corporate Responsibility *Report 2018 on Health Awareness* remarked that it used health campaigns to “raise awareness and knowledge” and that it “ultimately helped healthcare professionals and patients to make informed decisions” about their health [39].

b) Minimized the prevalence of disease risk conditions

Through health literacy, the underlying risk factors for chronic health conditions can be reduced or prevented. A health program that focuses on healthful living: good dieting and physical exercise are beneficial for individual wellness, emotional stability and for overall community health. Teaching about eating good foods such as fruits and vegetable and limiting excessive consumption of high caloric foods will promote good health and reduce the onset of diseases like diabetes, obesity and overweight [42]. Engaging in regular physical activities have the tendency to reduce high blood pressure, stroke, arthritis, diabetes, high cholesterol, and heart conditions [43] [44] [45]. Teaching school children about tobacco health risks, dangers of consuming sugary beverages, and alcohol will prevent most chronic diseases from happening.

c) Protects against the risks of misinformation and improve community health

Misinformation leads people to ignore the symptoms of serious diseases, delay seeking appropriate healthcare, not conform to regime or and the use of unproven traditional herbal cures or religious healings. Misinformation is very dangerous as it can lead to the worsening of a health condition-chronic or infectious. Shaw *et al.* [46] argue that cultural beliefs around health and illness contribute to an individual’s inability to understand and act on a health care provider’s instructions. Misinformation leads to peddling of wrong health information which affects care. For instance, people living with chronic diseases like diabetes, high blood pressure and mental illnesses suffer some type of social stigmatization [47]. According to Rural Health Information Hub [RHIfhub] [48] social stigma and privacy concerns are more likely to act as barriers to healthcare access. Illiteracy can lead to stigma and resistance to adhere to information. Studies show that lack of health literacy is a reason for resisting the use of insecticide treated bed nets to prevent malaria [49] [50] [51]. In the same vein, when a community has good health education about a disease, it does help in care and

management. Community support is improved.

d) Health awareness improves disease detection, timely access, and slows progression.

Health awareness of disease and symptoms is essential for screening and early detection and treatment [35] [44]. According to the National Library of Medicine [35], routine screening will lead to early detection and treatment of certain diseases like breast, prostate, colorectal cancers; diabetes, high blood pressure, osteoporosis, etc.

e) Health awareness demystifies fears and promotes assurance of better health practices or behaviors.

The COVID-19 pandemic, brought fears and jittery to most people due to lack of authentic information about the cause and trajectory of the virus [52]. Misinformation was everywhere as the number of death tolls increased every day. Scientists and health professionals worked tirelessly to provide answers to public questions and concerns as lots of misinformation were trending. Vigorous health campaigns in print and electronic media were used to disseminate information about COVID-19 that made people receptive to preventive measures. Consequently, people began to practice social distancing, wearing face masks, quarantining, and taking other preventive measures [53] to “reduce the intensity of spread and death rate.” Health literacy and awareness through print and electronic media brought a lot of solace to the people. In a study in Ghana on health knowledge and care seeking behavior in resource limited settings amidst COVID-19 pandemic [54] found that intensified public health education campaign across the country promoted interventions, healthier lifestyles, improved health knowledge, and care-seeking behaviors among the people. This underlies the important role health literacy plays in promoting disease awareness and empowering people to take positive preventive actions for themselves and others.

In summary, health literacy and awareness provide people the tools to self-regulate themselves and avoid behaviors that will transmit disease to them or others. It facilitates healthcare seeking or modification of behavior to minimize health risks and improve wellness. It also, improves communication and easy feedback with healthcare providers.

f) Cultural Beliefs and Attitudes to Chronic Disease Care

Every human is a product of a certain culture or an environment. Therefore, people often related to diseases in the dominant characteristics of their culture or environment. Kasahum *et al.* [55] stated that “Subjective beliefs about chronic disease conditions and their drug management are among factors determining adherence to medications that are amenable to interventions.” People’s perceptions about their diseases, knowledge, and care are based on their environment or setting [1] A study in Ethiopia about the impact of personal, cultural and religious beliefs on medication on patients with chronic disease [55] concluded that personal beliefs were significantly associated with low medication adherence and that study participants with stronger beliefs in the efficacy of traditional medicine were less likely to adhere to their medications. Differences in the culture of



the patient and care giver could be an impediment in chronic disease care [46]. It has been shown that people's culture, language and socioeconomic environments interact with and contribute to low health literacy, defined as the inability to understand or act on medical/therapeutic instructions [46]. Culture is also described as a system of shared beliefs, values, customs, behaviors and artifacts that the members of society use to cope with their world and with one another about diseases and cure [46] [56]. Hence it is a common practice for people to share their health concerns with family members who often suggest remedies even before the sick person sees a doctor. People's culture shape their opinions and beliefs about diseases and cures [56], hence the different cultural perspectives about disease:

i) The Personalistic Perspective: suggests that supernatural spirits or people cause diseases. (Disease is "personified").

ii) The Naturalistic Perspective: views health as a state of harmony between human beings and their environment. When this balance is upset, illness will result. Traditional Chinese medicine is based upon this perspective.

iii) The Western Scientific Perspective: This is a cause-and-effect perspective on disease that seeks analytical and physiological explanations and cures for disease like identifying a virus or bug. Western medicine is based upon this perspective.

As shown above, we can see how cultures impact peoples perspectives about diseases and how they possibly affect attitudes and access to care. Since the predominant health system in African is the Western medicine, there arises the need to close the gap between the Personalistic and the Western perspective about diseases through health literacy as an intervention and preventive process. This is necessary if chronic diseases should be controlled.

### **3. Consequences of Gaps in Health Awareness & Literacy**

Lack of health education and awareness poses serious health risks in the health outcome of people living with chronic health conditions. Living in the ignorance of one's poor health conditions does have negative impacts on health outcomes. Lack of health awareness exposes people to behaviors associated with chronic health conditions and can worsen their health outcomes [57]. Also, Health awareness can protect against poor perceptions about diseases and the use of available healthcare facilities [58]. Without any effort to educate people on common risk factors to chronic conditions, the disease persists and progresses as the patient continues to indulge in the same habit that caused the disease in the first place.

Lack of health literacy widens the gap between health and recovery from chronic health conditions. Lack of health literacy increases the chances of medication non-compliance and non-adherence to lifestyle changes. Dr. Francis Collins, Director, National Institutes of Health stated that Health literacy can literally mean the difference between life and death. A World Health Organization [59] report states that adherence among patients suffering from chronic diseases averages only 50%, and it is even lower in developing countries. According to the report equally "In Gambia, China, and the United States only 27%, 43% and

51%, respectively, of patients adhere to their medication regimen for high blood pressure.” Health literacy is one reason for non-medication compliance. For instance due to the fact that diabetes and high blood pressure don’t show significant symptoms that interfere with patients daily routine [60], adherence to regime is often neglected as patients think that disease has gone with little or no medication. Consequently, many have died from high blood pressure (also known as a silent killer) and its comorbidities due to lack of awareness. Adhering to medications and treatment plan by patients with chronic health conditions has direct impact on their health outcomes and recovery [41] [61]. While patients are responsible for medication compliance, Dr. Rafael Bengoa, Director, Management of Noncommunicable Diseases, WHO, said that “the healthcare systems is partially at fault” because healthcare teams are not providing support needed to change behavior [59].

### **Constraints to Health Literacy**

There are many constraints to health literacy. The impacts of these constraints may have different effects in developed and developing health systems.

i) In many African countries, there is paucity or absence of critical health data or research to actually help in understanding the trends of diseases. Health data are hardly collected and analyzed in most Sub-Saharan African countries. Without data, critical health information which are essential for planning, health literacy and awareness, emergency preparedness and policy formulation become hampered. Part of this problem is that most health workers lack the statistical capacities to collect, organize, manage and analyze data and the health departments do not care much about statistical data.

ii) African countries suffer from a serious shortage of health professionals both in quality and quantity [62], and from a forced migration of health workers to overseas for better opportunities [63]. For instance, health worker ratio in Africa is 1.55 to 1000 people which is far below the threshold of 4.45 recommended for effective essential health services [64]. There is also a maldistribution of health workers in favor of the urban cities which pose greater constraints to the number of health extension workers to remote villages.

iii) Socioeconomic factors of health literacy and access.

Majority of the African population are rural dwellers and thus tend to have poorer health outcomes because of the unhealthy environments in which they live. Typically, residents of rural African communities are unemployed, poor; illiterates or poorly educated, and lack access to portable water, good housing, roads, electricity, and equitable health facilities etc. [65] [66]. The Ottawa Charter for Health Promotion [67] emphasized the “inextricable links between people and their environment” (p. 2); as the basis for their socioecological model to health and that health promotion as a shared responsibility among individuals, community, and the health system should be promoted in the “classroom, community and among high-risk groups”. So, lower socioeconomic status greatly impacts the trajectory of someone’s life and the direction of their future [24] [68] [69]. In Nigeria for example, 60 million or 30% of the population cannot read or

write [70] and 63% (133 million) Nigerians live in multidimensional poverty [71]. These circumstances alone will only promote unhealthy living and limit access to health care and account for the reason most chronic disease are not detected and treated early enough.

iv) Adherence to certain traditional beliefs, myths or taboos about diseases and illnesses. Traditional medical care and beliefs are still part of African heritage. People's cultural beliefs and/or religious inclination affect their attitude to health issues.

v) Insufficiency of health education materials in the local language of the people.

Most health literature is not in the common language of the people. Some health workers may lack the ability to present the information coherently to people in their common language. The use of mixed languages and terminologies confuse the people further. Also, lack of access to media information: print and electronics deter their access to relevant health information while poor road and weak transportation infrastructure limit health extension workers from extending health education and awareness programs to communities in remote areas [72]. Access to health information is critical to good health [48] [73] [74]), and poses a challenge to rural dwellers who are constrained by lower education, unemployment, structural and systemic barriers to accessing health information.

vi) Poor funding. Health systems in African are poorly funded. Most countries allocated less than 5% of their Gross Domestic Product (GDP) to the health sector which is deplorably lower than the 15% recommended at the 2001 Abuja Declaration [63] [74]. Poor funding has direct impact on the quality and quantity of staff, training, and availability of health infrastructure.

#### **4. Conclusions and Recommendations**

Health literacy or awareness is an essential public health strategy for disease prevention, intervention and health promotion. Health systems have a primary duty to provide health awareness to their communities in the common language of the people and with respect to their culture. Patients who are knowledgeable about their disease conditions are more likely to follow health provider directives, ask relevant questions, engage with their health providers, and complete their regimes.

Community health awareness will promote health at the grassroots, build synergy for cooperative action for a change in the campaigns to prevent disease risk factors and promote positive health behaviors.

Overall, by increasing interests in early reporting, health care costs are saved in the short and long runs. Finally, it is necessary that adequate funds be allocated to the health system to enable to health literacy planning and implementation.

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