

Research Paper

Perceptions of Stroke Risks among West African Male Immigrants in San Diego: A Qualitative Investigation

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ABSTRACT

There are few studies that focus on the health beliefs, knowledge and perceptions of stroke in West African populations, especially English-speaking male immigrants residing in San Diego, California. Health promotion targeting to control stroke must take into consideration the community's awareness of the warning signs and risk factors of this disease. The aim of this study was to evaluate the role of culture in defining the perception and understanding of the warning signs and risk factors of stroke among male English speaking foreign-born West African immigrants in San Diego.

This qualitative study employed an ethnographic methodology involving 8 male participants, 4 each from the Nigerian and Ghanaian communities in San Diego, and applied the principle of saturation. An unstructured in-depth interview was used to collect data from the participants who were recruited through snowball and network sampling framework. A thematic approach was used in the data analysis. The data obtained from each participant were

initially coded using line-by-line open coding to develop a list of codes that were relevant to the research topic. Similar codes were combined and developed manually into themes. The individual transcripts were then downloaded onto the NVivo10 software and were reviewed for common words and phrases through the queries (i.e., frequent words and word clouds).

Eight central themes about cultural knowledge of health beliefs and practices in terms of the health of immigrant men were extracted and clustered from the qualitative analysis: (1) cultural beliefs of the cause of stroke, (2) prevention of stroke, (3) self-identity barrier, (4) awareness/knowledge of stroke, (5) awareness of the warning signs of stroke, (6) knowledge of the risk factors of stroke, (7) individuals access preventive health care services to prevent stroke, and (8) men seek the opinion of their wives on health issues.

Keywords: West Africa; Immigrants; Culture; Health beliefs; Prevention; Warning signs; Risk factor; Stroke

Background

Stroke, although a preventable chronic disease, is the second-highest cause of mortality around the world¹. Every year worldwide between five to six million deaths are associated with stroke; on average, one stroke-related death occurs every 4 min^{2,3}. Besides the high mortality rate, the high morbidity rate accounts for approximately 50% of survivors being debilitated¹. Annually, the burden of stroke is estimated to cost about 63 billion dollars globally both in direct and indirect costs.

Although there has been a significant improvement in the overall health of the general U.S. population, health inequity among ethnic and racial groups continues to be an issue of great concern in the field of public health^{4,5}. In the U.S., significant stroke disparities exist in the different minority ethnic and racial groups⁴. In comparison to Whites, who are the majority group, the burden of stroke is higher among Asians⁶, Black or African Americans and Hispanics population^{4,6} observed that while the incidence of stroke continues to be on the increase among ethnic and racial minorities, it has significantly declined among Whites in the

U.S. The decline in this population has been attributed to their knowledge and awareness of risk factors and warning signs of stroke and engaging in preventive measures in a timely manner^{4,7}.

Because of this disparity in the immigrant population, it becomes imperative to evaluate the perceptions of varying communities that make up the African immigrant population in the U.S. Foreign-born African immigrants constitute one of the fastest growing immigrant populations in the U.S. At the time of this study, over one million were living in the U.S.⁸⁻¹². One-third of this population was born in the West African countries of Ghana and Nigeria^{11,12}. Several factors have contributed to the upsurge of the immigrant population. This includes family reunification and regional conflicts, which have led to many communities being displaced in search of political asylum. In addition, the U.S. Diversity Visa program and the migration of highly-skilled Africans in the American workforce have also led to growing immigrant population^{8,11}.

It is very important to understand ethnic differences in stroke risk factors in the rapidly growing diverse U.S.

society in order to plan appropriate prevention strategies¹³. However, there is limited literature on stroke about African-born immigrants in the U.S.

Methods

A qualitative study was conducted to explore the perceptions of Ghanaian and Nigerian adults residing in San Diego, California, about stroke. The 2012 Immigration Policy Center report identified California with the second highest number of African-born immigrants (155,000) after New York with approximately 166,000 (IPC, 2012). Participants in this study were male adults 18 years and older who have lived in San Diego for a period of not less than 2 years and are able to write and speak English fluently. A total of 8 male adults were recruited for this ethnographic study, consisting of Ghanaian men ($n=4$) and Nigerian men ($n=4$). The emphasis on male is premised on the fact that gender differences exist between male and female in health care needs, health seeking behaviors and cultural views in the African cosmology¹⁵. For example, since men are accorded higher status than women in some societies, some men are not very accepting of health related information provided by female health providers. Further, women are generally known to have better health profile than men¹⁶. Due to unavailability of sampling frame for this group, a snowball and network sampling was utilized in recruiting participants. The participants were recruited from within 100 miles of the city of San Diego, California. Participants were recruited through a local church and African shop. Study flyers were distributed through the assistance and collaboration of the pastor and elders of the church. Further, some of the flyers were placed in an African shop frequented by this population. They were 8 participants for this study because no new tangible insights further emerged from the interviews that would have made any differences to the data already generated. This approach gave rise to the formulation of rich and succinct themes.

Data collection and analysis

An interview guide that aligned with the research questions was used to collect data from the participants. An unstructured questionnaire was used in interviewing the participants in a face-to-face format from July 9, 2015, to August 2, 2015. Each interview lasted between 45 min to an hour and was audio taped. The questionnaire consisted of socio-demographic information such as age, education, marital status, education, occupation and years of residence in San Diego. Approval to conduct this study was obtained from Walden University Institutional Review Board (IRB; IRB Approval #06-15-0244031).

The audio taped interviews were transcribed verbatim prior to the content analysis of the transcripts. The study data were analyzed manually and with the software, Nvivo 10. Line-by-line open coding was used to develop a list of codes that were peculiar to data collected from each participant. These similar codes were clustered into a number of major themes. This process made it possible for the code structure to evolve inductively,

which reflected the experiences of the participants in respect of the study. Subsequently, the individual transcripts were then downloaded onto the NVivo10 software and common words and phrases were reviewed through the queries (i.e., frequent words and word clouds).

Findings

In using the data analysis described above, eight key themes emerged during the study: (1) cultural beliefs of the cause of stroke; (2) prevention of stroke; (3) self-identity barrier; (4) awareness/knowledge of stroke; (5) awareness of the warning sign of stroke; (6) knowledge of the risk factors of stroke; (7) individuals access preventive health care services to prevent stroke; and (8) men seek the opinion of their wives on health issues.

Cultural beliefs of the cause of stroke

An individual's understanding of the cause of illness will determine the type of treatment being contemplated^{17,18}. There was a consensus response among the participants that stroke is a preventive deadly disease. Reiterating the beliefs of many Africans home and abroad, most sickness are not due to natural occurrence, but factors such as voodoo, the wrath of the ancestors or enemies. One of the Ghanaian men expressed this sentiment, "culturally, our people have a belief that for every sickness there is a curse. So, when such things happen, it is always related to another cause, such as the enemies are after you or you have done evil things and the gods are offended." It appears that when people have difficulties in identifying the cause of sickness, it is comforting to attribute the cause to somebody or to some super natural powers. Comments such as "somebody has done it to you...attack of the spirit" expressed their perception of the cause of illness. One of the participants from Nigeria highlighted this belief system when he summed his childhood experience in this way, "As a child I suffered what is known as a mysterious sickness, we went to the best hospitals in my country but the doctors could not come out with a satisfactory diagnosis, eventually my family resorted to the use of herbs and prayers and here I am today. Yes, sickness is attributable to spiritual attack, like witches and wizards, spells, voodoo, juju and a host of others."

Notions of prevention of stroke

Although many Africans seek medical intervention when they are very sick, the concept of disease prevention is not alien to them^{9,18}. Based on their understanding of the cause of illness, stroke can be prevented through prayers, adherence to religious tenets and diet and diet restrictions. Most Africans are known to be religious and have used religious beliefs and practices in pursuing the prevention of sicknesses mostly due to the fact that sickness is attributable to spiritual attack by the devil¹⁹⁻²¹. One of the male participants from Ghana stated that "people turn to God for protection and some engage the services of traditional priests and some do voodoo based on the fact that most sickness is diabolical." Further, adherence to religious values and prayers could prevent or minimize the

occurrence of stroke. One of the participants from Nigeria stated that, “stress is one of the causes of stroke as they say, if I believe in God and I live a down to earth life and am very happy, how I will develop high blood pressure or hypertension.”

Some participants, who have lived in the U.S. for over 10 years, though not oblivious to the role of prayers in their lives, have dissenting opinions. A participant from Ghana remarked that most people turn to God in a state of hopelessness as a result of financial constraint in paying for medical cost. He pointed out that:

The system has made it easier for me so to say in terms of availability and access to health care services, which is affordable. In Ghana, you pay for medical services out of pocket because we have no health insurance in my country. No money, you pray to God to heal you.

In African cosmology, the role of home and folk remedies such as the use of herbs is an age-old practice for the prevention and treatment of ailments²¹. However, there are divided opinions among participants as to the effectiveness of folk remedies in the prevention of stroke. A participant from Nigeria is an advocate of herbal medicine.

It is high time we begin to look at the natural aspect of approach to treatment rather than this synthetic so called advanced medicine. God has given us a lot of things, all the herbs that he provided us in the world. There is so much that we have not discovered yet. It is only the Africans and the Asians that have discovering it. Every herb in the world has a reason. It has a power behind it...but we do not want to look at that. Because we want to call it advance but the advancement is not the reasonable advancement. We the Africans would want to look at it from our own perspectives. Herbal medicine. Herbal cure. All plants have an answer to our problem.

However, some participants shared different sentiments because stroke for them is a medical condition that ought to be addressed medically. A Nigerian participant stated,

There are people who believe back home that the use of herbs will cure stroke. But I don't know if because I have been away for a while now, my belief is that it is a medical condition that comes from within. It has not been proven how herbs go into the body and rejuvenate these parts of the body that are shut down by the medical condition. So that is why I have difficulty in believing it, it has not been proven. It might be there, you know. Some say go through the traditional means of massage and other stuff, it keeps the blood circulating again and so gets cured.

Furthermore, diet and dietary restrictions could help in preventing stroke. Participants believe that we are the products of what we eat, most especially the processed food, which they identified as harmful to the body. A participant from Ghana alluded to this fact, “I think some more natural foods, some food that are closer to nature that are eaten as they are grown like tubas (yams) and fruits can be more

helpful compared to processed food.” However, a general consensus was that diet restriction was a motivation that should be combined with other factors.

Self-identity barrier

One of the self-identity barriers that emerged from this study is that sickness is associated with weakness. Most women, including African immigrant women, have a better health profile than men because of the attitude of men in being hesitant in going for check-up or early treatment on the onset of any symptoms¹⁶. One of the contributory factors to this attitude is the African male perspective of sickness and the male ego. According to a participant from Nigeria, “the man is seen as stronger than the woman and takes a lot of responsibilities. I see sickness as something that reduces that which makes a man a strong one.” Another Nigerian expressed a similar opinion, “sickness is a sign of weakness and so suck it up and keep moving. Nobody wants a weak husband; every woman wants a strong man that can put food on the table.”

Fear of the outcome of a test and medical terminologies is another factor that contributes to participants' lukewarm attitude toward hospital visitation. For example, one of the participant stated that “they are scared, they do not want the doctor to tell them, oh, you have this illness...they do not want to hear it because it might make them scared, depressed and uncomfortable.” Fear of medical terminologies has to do with the level of health literacy of the focus population. Difficulties in understanding unfamiliar medical jargons that they are not used to prior to immigration and how best to utilize the U.S. health system creates a sense of vulnerability, which makes them less motivated to seek preventive and medical measures.

Awareness/knowledge of stroke

Both Nigerian and Ghanaian participants have the same understanding of stroke as a deadly disease closely associated with paralysis and incapacitation of an individual. One of the participants from Nigeria who works in the medical field stated, “Everything is shut down. So usually your reactions are slow, and the person might not be able to talk. It affects eyesight, the speech, and affects other parts of the brain.” Comments such as “stroke is not an ordinary sickness in comparison to headache, malaria, and fever” and “it can keep you in bed forever” are all indications that show their perception of stroke. Despite the fact that the word stroke is a foreign terminology to the African society, three of the participants from Nigeria identified the names of stroke in their cultures as *oga agbowo ghere*, *bamo*, and *ubamo*. *Oga agbowo ghere*, which is used by the Igalas from Kogi State, Nigeria, simply describes stroke as a sickness that leads to the numbness of the limb. A participant from Ghana said that they have no specific name for stroke but a simple description as a sickness that can put you in bed forever as a result of paralysis.

Awareness of the warning signs of stroke

Although the participants had a broad perception of stroke, they seem to have a sparse knowledge of the warning signs of stroke. This conclusion is based on the comments of some of the participants. Their emphasis was on the suddenness of stroke when they were asked about their knowledge of the warning signs of this disease. One of the participants stated that unlike other diseases that are symptomatic and easily detectable this cannot be said of stroke because “it strikes like lightning and thunder, it acts fast and swiftly”. Other participants alluded to the suddenness of stroke in this way as, ‘when you kind of hug somebody, so the spirit like *ubamo* grabs you suddenly’, “it is a silent killer” and “stroke is a disease that sneaks up on you without warning.”

Knowledge of the risk factors of stroke

One of the themes that emerged from this study was the poor awareness of the risk factors of stroke among some of the participants despite their level of education. This finding supported a similar finding in a study attributing the high incidence of stroke among African American men in the U.S. to limited knowledge of risk factors of stroke^{22,23}. It was identified 13 different types of risk factors of stroke: high blood pressure, stress, high cholesterol, cigarette smoking, being overweight, family history, previous stroke, insufficient physical activities, diabetes, abuse of alcohol, irregular heart attack, previous heart attack and the aging process.

When asked about the awareness of risk factors of stroke, one participant commented, “I do not have an absolute like detail knowledge of it, I have a very peripheral knowledge of what can trigger stroke. My understanding of the most factor of what can trigger stroke is when you don't drink enough water to cool down the body temperature. You might come down with stroke.” Another participant identified three risk factors: stress, diet and condition of living. He remarked that, “modern science tells us that there are many things that can cause stroke, mental problem like over working without rest, the inability to take care of your body like your feeding...The condition of living is also part of the problem of stroke.” A participant from Nigeria with a medical background identified five risk factors, the highest among the participants. He said, “Sometimes, it can develop with time though it does not run in the family. It can leave somebody with family history. People with high blood pressure so then sometimes, medically when it's okay, people need to exercise. The kind of the things you eat, the kind of food and other things. People might become diabetic even though it does not run in the family. This happens because of what they eat...” “It's not really new, it's just the awareness. It's been there for a long time, and they'd be handling it in their own way, but they really do not know what causes stroke, how it kills. So the education, like I said, is not there as to really analyze how to handle stroke.”

Individuals access preventive health care services to prevent stroke

Some participants identified the underutilization

of preventive health care services in ameliorating the incidence of stroke. Periodic check-up and screening for high cholesterol, hypertension and diabetes are health care practices and behaviors that are deemed helpful in stroke prevention. However, participants were aware that in their home countries the health care system was poor and made preventive health care services difficult, if not impossible. A participant from Nigeria remarked, “In my country, it makes no sense to go for check-up, people go to hospitals when they are sick and not to look for sickness. It is a Western ideology and I am beginning to see the importance.” Another participant, quoting the old saying that a stitch in time saves nine, acknowledged the importance of the U.S. health care system in encouraging preventive services through availability and affordability. Their shift in perspective in favor of orthodox preventive services came from the awareness that stroke is a preventable disease and preventive measures are critical. Personal experiences of the participants played a significant role in their advocacy for accessing preventive health care services. One of the participants recalled his personal experience

My father lives in Africa. And he visited here couple of years ago like few years ago he came here for health check-up and then it's like an aha moment for me when the doctor was asking "do you go for periodic check-up?" It reawakened that consciousness in him to do periodic checkup because for the reason that he doesn't go for periodic checkup has created a bigger problem for him now. If he were to go to regular check-up while in Africa, we could have actually been able to avert early enough, but because he did not do that, so now we are dealing with the end result of it, so now we have to make him go for regular checkup...So I do periodic check-up because I saw what it has done to my father firsthand by not going to your doctor regularly.

Men seek the opinions of their wives on health issues

Despite the popular belief that Africa is a masculine society, African women are often seen as resource persons on health issues. One possible explanation for this variation is that women more readily appreciate the benefits associated with a visit to the doctor's office^{24,25}. All but one of the participants seeks the advice of their wives when they are symptomatic. The rationale behind this practice supports previous findings that women are more health conscious and have better awareness of health risks¹⁶. The participants who relied on their wives on health issues stated that women frequently visited hospitals and doctor's office because of childbirth and caring for family, most especially children. A Ghanaian participant stated, “Women go more frequently to the hospital than men because of childbirth. I am from a family of 8. Cannot count how many times my mother went to the hospital due to pregnancy and labor. They have prenatal and antenatal and all kinds of classes but I can count the number of times my dad had gone to the hospital.” Another participant alluded to this fact when he stated that, “Because when women are pregnant for the most part, they come in contact with modern medicine, they come in contact with

doctors who actually tell them what to do, this is what they need to do to stay healthy. The men, I know are not exposed to going to the hospital like the women are in Africa.”

Results and Discussion

The interviews generated new information and confirmed themes discussed in existing literatures on the perception of stroke among African immigrants. The participants identified cultural health beliefs and practices in their different communities prior to their migration to the U.S. Some of the participants brought these beliefs and practices with them but these seem to be fading as they are integrated into the mainstream of the society. Although previous studies have shown underutilization of health care services and low rates of screening among African immigrant men, some participants in this study are becoming conscious of their health and taking advantage of screenings to check their health status. Health education and promotion may play a large role in this phenomenon. Some of the participants reiterated this shift in practice. Periodic medical exams were seen as important to predict possible future sickness. A participant stated, “It’s necessary. It helps you to be aware of killer diseases such as stroke and diabetes, so that you know where you are at least.” Another participant observed,

I will tell you...for me, unfortunately, I am diabetic. Sometime I discovered a couple years ago that I have cholesterol. And I know that if you don’t go for medical check-up regularly, and take your medications as recommended, it could lead to stroke, it could lead to heart attack, so I have personal doctors who I go to visit, take my medications, exercise.

Another finding was that participants had a general knowledge of stroke as a silent killer that can lead to paralysis and incapacitation for the rest of their lives. Their knowledge of stroke was based on personal experiences. They have seen and cared for family members who suffered and died from stroke. Also, some of the participants identified the names for stroke in their communities. It is interesting that they pointed out that stroke is a preventable disease through cultural pathways and orthodox measures. These findings are consistent with earlier studies^{9,18}. Determining the causality of a disease plays a significant role in mapping out strategies for prevention or treatment^{9,17,19}. Some of the participants reported that as a result of limited health literacy and cultural influence, stroke is considered in the supernatural realm as a form of an attack by the devil. Individuals with such belief system tend to opt for traditional prevention and treatment of stroke. Conversely, those who view it as a medical condition will utilize health care services.

Health literacy is one of the determinants of health. Unfortunately, groups such as immigrants with greatest health care needs lack the depth to comprehend essential information, which accounts for the underutilization of health care services²⁶. Although participants subscribed to seeking medical approach, some are reluctant to do so. This led us to critically consider how a typical African man associates

sickness with weakness. The traditional role as the provider for the family places burden and responsibility on the man. Failure to accomplish these duties is thought to make the man less human. The following statements by different participants highlighted this thought pattern. “Sickness is a sign of weakness and so sucks it up and keeps moving. Nobody wants a weak husband; every woman wants a strong man that can put food on the table.” “Sickness is what reduces somebody’s ability to do many things. You lose the ability to walk, work and to provide for your family, ability to think, ability to coordinate your health functions. All these make you less a man due to your inability to provide for your family.”

Also, the theme of weakness is integrated in the perception of hospital by some of the participants. This is part of the male ego. Coming from a masculine society with the macho status, a visit to the hospital entails succumbing to weakness and shift in power structure. Normally, men have the final say but in the hospital, they lose this privilege and have to take orders from somebody else. This view was collaborated by a participant’s observation. He stated, “We come from a masculine environment and men have the final say but you might lose this power when you go the hospital, where you will be ordered around.” This is why most minorities racial men abhor going for counseling because of the assumption that counselors dictate to them what ought to be done²⁷.

Limitations

There are some limitations in this study. The method of recruitment of participants and the sample size might prevent the findings of this study to be generalizable to the African-born male immigrants in the whole of U.S. A non-random convenience sampling design was employed in recruiting the participants. Also, the participants of 8 male adults were recruited from only two English-speaking West African countries. Taking into account that Africa is not a monolithic society, it is challenging to describe concepts that resonate with all groups²⁸. Also, very few participants had prior experience in research study and this was reflected in their responses that were brief and precise. Gathering more information could have been helpful. However, we attained saturation when the interviews yielded no more new information. Lastly, some of the participants were from the healthcare industry and it’s not clear to what extent their background influenced their opinion.

Conclusion

This study explored the association between health beliefs and stroke risks among a vulnerable population. Results provided an insight on how belief plays a significant role in an individual’s perception of the cause of a disease, prevention and treatment of a disease. This study used a cultural lens to provide peripheral/baseline facts on how foreign-born Ghanaians and Nigerians male immigrants residing in San Diego perceive stroke and their level of knowledge of the risk factors and warning signs of stroke.

Despite the level of education, cultural sensitivity and length of stay in the U.S., one thing that resonated with them is the prevention and reduction of incidence of stroke either by traditional or orthodox measures. Any efforts designed to leverage the burden of stroke among African immigrant men should focus on improving their knowledge of the risk factors and the warning signs of stroke. This strategy will ensure an urgent response in seeking medical intervention when warning signs in the form of unusual neurological symptoms are apparent. These symptoms include tingling, face drooping, dizziness, unusual visual episodes, headaches and slurred speech.

Since this was a preliminary study, the finding that women are a health resource for men and are considered more knowledgeable about health care because they frequently visit hospitals and doctor's office due to childbirth, is an important and novel finding. More research is needed to ascertain how best to use the role of women to encourage African immigrant men to seek health care.

Future research can investigate how best to integrate and promote culturally designed preventive measures in this community. Reduction in the incidence of stroke mortality and morbidity has been associated with increased awareness of the warning signs and risk factors of stroke. Most immigrants brought their culture with them. Thus, health promotion programs that focus on increasing the awareness of the population on the risk factors associated with stroke through community education with a cultural undertone will hopefully lead to a decline in the incidence of stroke among African immigrant population. This is significant because cultural health values and practices play a vital role in an individuals or collection of individuals' capacity to assimilate, comprehend, and to decide on health related issues.

Conflicts of Interest

None

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