



Review

Understanding the Impact of African Traditional Beliefs, Customs and Medicinal Practices on the Ebola Outbreak Crisis in West Africa

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Abstract

In much of Africa, beliefs, religion and traditional medicine have historically gone hand in hand, but increasingly these elements have come into conflict with modern healthcare which is secular in nature and more heavily challenged. Indeed, the estimates are that about 70-80% of the population in developing countries depends on traditional medicine for their primary health care needs. There is a strong belief which purports that Ebola is contracted through a curse, or in some cases, that it is a white man's fabrication. Such perceptions inevitably lead to mistrust of foreigners and associated humanitarian protective equipments, and to modern medicine as a whole. Strengthening primary healthcare has an expanded coverage mandate to include legally permissible medical interventions which might violate religious norms and fuel further tensions. This paper aims to: (1) identify the various ways in which African religion and healthcare intersect in issue of global health security; (2) understand how African beliefs and traditional practices impact on healthcare seeking behaviour and attitudes within African communities and (3) explore ways in which to promote greater diversity in healthcare alternatives, by considering integration of African traditional medicinal practices and homeopathy towards greater global health security.

Keywords: Africa, traditional, beliefs, customs, medicinal, practices, transmission, Ebola.

INTRODUCTION

Ebola outbreak crisis in West Africa

As the Ebola outbreak crisis races into its ninth month, leaving behind almost dead across the worst affected countries, Guinea, Liberia, Sierra Leone, experts have warned that an influx of international emergency response/aid can only contain the epidemic alongside other measures in communities (WHO, 2014). Already the disease has spread to other West African countries

bordering the hardest hit nations, including Nigeria, Senegal and most recently, in Mali. Controlling the epidemic will entail placing greater emphasis on prevention, as well as controlling and containing Ebola transmission which must be supported by massive behavioural changes. Notably, changes in funeral rites will be keyed to stemming this epidemic in West Africa. In previous Ebola outbreaks elsewhere in Africa, there have been multiple challenges. The lack of early warning and



Figure 1. Young girls looked at a poster bearing information on and illustrations of best practices that help prevent the spread of Ebola virus disease, in the city of Voinjama, in Lofa County, Liberia.

surveillance systems and generally poor public health infrastructure has been aggravated by misconceptions regarding the cause of the disease. Rampant fear and suspicion was observed in affected communities, fuelled by traditional beliefs and superstitions (Lawrence et al., 2014; Tambo et al., 2014). Some religious faiths are currently playing a critical role in educating their followers about Ebola by teaching the communities how the disease is spread. Particularly affected by Ebola are vulnerable communities who are already suffering from other ailments related to poverty: those experiencing food shortages, communities with high maternal and child mortality, and also a high rate of water-borne infections.

Years of wars have left the health systems crippled in many African nations as the spread of the deadly Ebola outbreak throughout West Africa is leaving hundreds of children orphaned, and a number of them are reportedly marginalized by some tribal communities due to the fear evoked by witchcraft and black magic by traditional practitioners and their communities. Over 3000 orphaned children have been registered in Liberia. These are children who are not themselves infected with Ebola, but who have lost their parents from the disease. At least further 600-700 children have been quarantined. Such youngsters are faced not only with coping with the loss of family members, but also with the prospect of living in a society where witchcraft is an accepted practice (Hewlett and Hewlett, 2005; WHO 2014). This paper explores the impact that African traditional beliefs, customs and medicinal practices have on the Ebola outbreak crisis in

Africa. It also provides suggestions on what actions are necessary in order to prevent, control and contain the current and any future Ebola outbreaks, or outbreaks of other similar emerging infectious diseases. Finally it touches upon the issue of how beliefs and practices impact the health seeking behaviour of communities. Promotion of greater diversity in healthcare alternatives, including African traditional medicinal practices, could better protect the health of communities worldwide and bring about greater global health security.

African Traditional Beliefs/Religions and Traditional Medicinal Practices

West Africa can be characterized as being deeply religious, and the region is home to some of the world's fastest growing Muslim and Christian populations. The risk of Ebola spreading to other countries is significant, given the extensive movement of families across porous borders, and where witchcraft, black magic and use of traditional medicines are common practices in the community (Bah and Aljoudi, 2014). The multitude of posters and banners strewn across different cities in the region are constant reminders of the solace that many people find in spirituality, amidst an increasingly fearful and desperate situation. As the Ebola epidemic tightens its grip, West Africa has turned to traditional beliefs and religion in a bid to feel reassured amidst much desperation and uncertainty. Even so, there is a need to strike a balance between accommodating people's

religious convictions, and ensuring that global health security is not compromised. For many communities traditional medicine is the only accessible form of healthcare. To make matters worse, outlandish rumor-mongering about spiritual curses and foreign causes of disease has eroded the confidence that communities have in modern healthcare. Pathogens and disease vectors alike, are exhibiting a growing trend of resistance to common antimicrobial agents which are widely used in modern healthcare.

This dire situation has increased the need to search for suitable alternatives. Traditional medicine offers a more affordable and accessible option for much of the African population. It has widespread community acceptance, being rooted in the ancient traditional medicinal practices of many cultures (Sjaadven, 1997; Sofowora, 1993b). Traditional practices are embedded in theories, beliefs and experiences which belong to different peoples and communities, and are thus perceived as a fundamental feature of their own identity. They are often closely intertwined with lifestyles, cultural frameworks and social regulations, as well as domestic legislation and implications directly linked with promotion of cultural diversity. It is estimated that about 70-80% of the population in developing countries depends on traditional medicine for their primary health care needs. Its widespread usage in the management of both communicable and non-communicable diseases such as malaria, diabetes, cardiovascular disorders, depression, asthma, cancer, HIV/ AIDS, hypertension, and tuberculosis is well recognized (Ernst, 2000). In part, this is because it has consistency with indigenous cultures and traditions. Another reason for the popularity of traditional medicine could be the misconception surrounding the therapeutic efficacy, or toxicity, of modern drugs (Olujoba *et al.*, 2005; WAHO, 2008). Although some progress has been achieved in integrating traditional medicine into modern healthcare systems, in most African countries implementation has been rather slow. Africa remains challenged by the inherent complexity of health care policy implementation and the multiple variables such as the heavy burden of communicable diseases (Nwokocha, 2008).

Indigenous beliefs are spread throughout West Africa. In Sierra Leone 30% of the population are followers of indigenous beliefs. Liberia on the other hand has a predominantly Christian population (over 85%), but indigenous beliefs are sometimes mixed in with the larger religions (Bah and Aljoudi, 2014). Notably though, officials have fretted about the impact of influential spiritual leaders, concerned that evangelical churches in particular, which sometimes gather thousands of the faithful in services promising "healing", could ignite new chains of Ebola transmission. In addition some spiritual leaders have been urging their congregations to recite prayers, for example Muslims have been told to recite the *Al Fathia*. Similarly followers of other faiths were

instructed to recite prayers addressed to the deity of their beliefs.

The impact of African traditional beliefs and medicinal practices on the Ebola outbreak and global health security

The principal nations caught in the crosshairs of the Ebola crisis, namely Guinea, Sierra Leone and Liberia, face common challenges that make containing the disease especially complex: high levels of poverty, weak state structures, and cultural beliefs about death and the afterlife that contribute to the spread of the disease, with health workers particularly at risk (Kunii *et al.*, 2001, Hewlett and Amola, 2003). The most important reality is that unless the spread of the infection is contained at its source, then no amount of curative services will meet the needs of affected West African communities. Thus there is an urgent need to raise awareness and implement appropriate actions at the community level. It is critical to teach communities about taking basic precautions to prevent the spread of the disease, and isolating those who show symptoms, so that they can be tested and treated.

A more grass-roots approach is required to re-address or abolish previously rooted traditional practices. Family members who come into contact with bodily fluids of Ebola patients in the process of nursing them, or those who hug or watch/touch the bodies of those who died from the disease at funerals, run a very high risk of contracting the disease, and becoming themselves transmitters of the infection (Kunii *et al.*, 2001). Other risk factors stemming from cultural practices may come from direct or indirect contact with great apes, through cooking or consumption of chimpanzee meat (Hewlett *et al.*, 2005, Leroy *et al.*, 2005) and a direct consequence of impoverished living conditions (MacNeil and Rollin, 2012).

The use of the experimental drug ZMapp™, which has not undergone safety tests in humans, remains an ethical concern. If the drug is used in African patients and found to be ineffectual, or to cause serious side effects, then its use may further exacerbate mistrust in healthcare workers and modern medical treatments (Gostin *et al.*, 2014). Ebola's deadly spread in Africa has been driven by public health failures and cultural beliefs. Additional factors such as the shortage of trained health workers, very weak health systems and inexistence of surveillance, preparedness and emergency response, the lack of expertise in disease prevention and containment, the lack of training in epidemiology, basic personal protection and sanitation, logistics and social mobilization have contributed to worsening the epidemic, and driving countries to the brink of political instability. The hard-won economic development of past decades which has lifted millions out of poverty has come under threat. In places where the concept of infectious diseases is unknown,

Ebola victims and their families are often stigmatized. Some in the community believe that the illness is the result of a curse and that those associating with the victim or the victim's family felt or will fall under the same curse. In some instances health workers have met with hostile reactions from local communities. Ebola survivors are still challenged with the trauma as many residents in affected communities are still very frightened to resume public duties, public places, restrained to western medications and treatments or to come into contact with others citizens, denial and stigmatization in affected families, and view health facilities with suspicion (Tambo et al., unpublished).

The way forward

The international efforts aimed at supporting national responses to the ongoing outbreak are provided in the form of financial aid, technical assistance, and delivery of commodities, such as personal protective equipments (L Gostin and E Friedman, 2013).

Funding from the international community to combat this crisis should be channelled to strengthen oversight capacity, and facilitate the monitoring and evaluation of investments intended to bolster affected countries and regional health and resource capacity. Countries affected by the Ebola crisis need focused support to overcome the current and any future outbreaks, and to assume country ownership of health programs. Clearly, effective community engagement approaches are needed to tailor responses by non-government organizations (NGOs), and to seek to engage with local leaders and citizens to garner community trust, engagement, empowerment and entrepreneurship in providing basic community work, going house to house, street by street outreach and counselling, identifying cases, overcoming misinformation, and educating communities.

Awareness campaigns can be effective only if the community's trust and cooperation has been won, and a participatory role for the community in planning, conducting operations and logistics has been assured. Diseases with zoonotic potential such as Ebola, avian influenza H5N1 or H7N9, Middle East Respiratory Syndrome (MERS) or Severe Acute Respiratory Syndrome (SARS) coronaviruses periodically spill over from animals to cause outbreaks of illness among human populations. Such events should accelerate activities to detect, prevent, and respond to these and other similar global infectious disease threats. Conducting nationwide public awareness campaigns and providing ongoing public health education is critical. It is clear the epidemic will not be contained without a massive deployment of frontline and borderline related activities, include providing support for WHO and national Ebola response plans, implementing awareness raising campaigns, bolstering disease surveillance and detection capacity, availing commodities and health supplies, conducting

training on the appropriate use of protective equipments, training personnel on personal hygiene and sanitation, as well as creating an enhanced understanding of the risks and dangers of traditional burial practices.

Controlling the outbreak will entail massive efforts on all fronts. Aside from issues of raising public awareness, the consolidation of comprehensive data into centralized databases can help to better coordinate the response efforts at the national level. Early warning and surveillance systems database management is critical since it will enable healthcare authorities and policy makers to access evidence-based information for continuous assessment of health and educational programmes.

Identifying challenges faced by health systems to provide effective emergency responses to health crises can serve as a stimulus to develop innovative technologies. Public safety and emergency management measures should focus on design analysis, health systems architecture, core enabling technologies, and field evaluations of operation systems that allow effective emergency response, accessibility to citizens, and recovery from all health emergencies and biohazards. A commitment to pursue advanced research which may potentially lead to the development of smart approaches for safeguarding the health of populations, may help to create more resilient communities, and succeed to alleviate the documented difficulties faced by West African developing communities and elsewhere (Parkes-Rebanshi et al., 2014).

Finally, technological enhancements in health infrastructure and transportation, as well as sustainable food production and distribution, can play a significant role in improving the quality of life of impoverished communities. Such actions may include, but are not limited to promotion of systematic and evidence-based sustainable engineering, information and communication technologies, viable agriculture and efficient sanitation systems, water and natural resource management, renewable energy development and environmental protection and scaling up healthcare accessibility and delivery services to most remotes rural communities.

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REFERENCES

- Bah SM, Aljoudi AS (2014). Taking a religious perspective to contain Ebola. *Lancet*. 2014 Sep. 13;384(9947):951. doi: 10.1016/S0140-6736(14)61344-1. Epub 2014

- Elujoba AA, Odeleye OM, Ogunyemi CM (2005). Traditional medicine development for medical and dental primary care delivery system in Africa. *Afr. J. Trad. Complement Altern. Med.* 20052 (1): 46- 61
- Ernst E (2000). Prevalence of use of complementary/alternative medicine: a systematic review. *Bull World Health Org.* 2000 ;78(2):252–257
- Gostin and Eric Friedman (2013). "Towards a Framework Convention on Global Health: A Transformative Agenda for Global Health Justice," *Yale Journal of Health Policy, Law, and Ethics*, 2013, 13 (1).
- Hewlett BL, Hewlett BS (2005). Providing care and facing death: nursing during Ebola outbreaks in central Africa. *J. Transcult. Nurs.* 2005 Oct;16(4):289-97
- Hewlett BS, Amola RP (2003). Cultural contexts of Ebola in northern Uganda. *Emerg Infect Dis.* 2003 Oct;9(10):1242-8.
- Hewlett BS, Epelboin A, Hewlett BL, Formenty P (2005). Medical anthropology and Ebola in Congo: cultural models and humanistic care. *Bull Soc. Pathol. Exot.* 2005 Sep;98(3):230-6.
- Kunii O, Kita E, Shibuya K (2001). Epidemics and related cultural factors for Ebola hemorrhagic fever in Gabon. *Nihon Koshu Eisei Zasshi.* 2001 Oct;48(10):853-9.
- Lawrence OG, Daniel L, Alexandra P (2014). "The Ebola Epidemic: A Global Health Emergency," *JAMA*, (August 11, 2014).
- Leroy EM, Kumulungui B, Pourrut X, Rouquet P, Hassanin A, Yaba P, Délicat A, Paweska JT, Gonzalez JP, Swanepoel R (2005). Fruit bats as reservoirs of Ebola virus. *Nature.* 2005 Dec 1;438(7068):575-576
- MacNeil A, Rollin PE (2012). Ebola and Marburg hemorrhagic fevers: neglected tropical diseases? *PLoS Negl Trop. Dis.* 2012 Jun;6(6):e1546.
- Nwokocha E E (2008). Traditional healthcare delivery systems in the 21st century Nigeria: moving beyond misconceptions. *World Health Popul.* 2008 Mar;10(1):23-33.
- Parkes-Ratanshi R, Elbireer A, Mbambu B, Mayanja F, Coutinho A, Merry C (2014). Ebola outbreak response; experience and development of screening tools for viral haemorrhagic fever (VHF) in a HIV center of excellence near to VHF epicentres. *PLoS One.* 2014 Jul 9;9(7):e100333.
- Sjaak van den Geest (1997). Is there a role for traditional medicine in basic health services in Africa? A plea for a community perspective. *Trop. Med. Intl. Health* 1997., 2(9): 903–911.
- Sofowora A (1993a). Recent Trends in Research into African Medicinal plants. *J. Ethnopharmacol.* 38: 209-214
- Tambo E, Ugwu EC, Ngogang JY (2014). Need of surveillance response systems to combat Ebola outbreaks and other emerging infectious diseases in African countries. *Infect Dis Poverty.* 2014 Aug. 5;3:29. doi: 10.1186/2049-9957-3-29. eCollection 2014
- WAHO (2008). TM Workshop Report. Situational Analysis of the level of development of Traditional Medicine in the ECOWAS Member States, 2008.
- WHO (2014). "WHO Director-General briefs Geneva UN missions on the Ebola outbreak," Briefing to United Nations Member States, August 12, 2014.
- WHO (2014). "WHO Director-General briefs Geneva UN missions on the Ebola outbreak," Briefing to United Nations Member States, August 12, 2014 and USAID, *West Africa Ebola Outbreak-Update #8*, August 25, 2014.