

Terrorism, population health, and epidemiological dynamics in Nigeria: implications for public health

Abstract

Background: Terrorism is the use of violent action in order to achieve political aims or force a government to act. It has become a growing trend in the global scene today in varying dimensions from hijacking, bombing, to state terrorism, bio-terrorism, cyber terrorism, eco-terrorism, nuclear, and narco-terrorism. All these disrupt population health with far reaching consequences.

Objective: This study explored the dynamics of terrorism and public health in Nigeria.

Methods: A narrative overview of relevant literatures was carried out. Literature search was carried out in PubMed, and Google Scholar. Information from previously published articles covering terrorism and public health was condensed to present a broad perspective and development. Only articles written in English Language carried out between 1999 and 2018 that clearly referred to terrorism, public health and diseases was used. Extracted information was discussed narratively.

Results: A total of 1595 people died through terrorist attack in 2013 and 6118 in 2014. Immunization officers were killed in northern Nigeria in 2013. This to massive decline in immunization activities in northern Nigeria and contributed to the re-emergence of polio. In 2014, 662 terrorist attacks resulted in the death of 7512 people and 2246 were injured with varying degrees of disabilities. Many internally displaced peoples (IDP) fled to make shift camps with poor hygienic conditions with records of epidemics, psychosomatic conditions, malnutrition, overcrowding, and death.

Conclusion: The study suggested that terrorism deplete the general living condition of people and predispose them to varying levels of illness and diseases and ultimately disrupting public health status. Review, implementation of government policies, and equitable resource allocation could be utilized as preventive strategies

Keywords: Terrorism, public health, epidemiology, population, diseases, migration, Nigeria

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Abbreviations: DFID, Department for International Development; USAID, United States Agency for International Development; UNICEF, United Nations International Children's Emergency Fund; IDP, Internally Displaced People; USD, United states Dollar

Introduction

Terrorism predispose its victims to physical, psychological, structural, and systemic traumas and distress in cascades of actions leading to immediate and remote disease burden, epidemics, outbreak of internally displaced persons and refugees with their attendant problems. Since every incidence of terrorism leaves the immediate and remote environment with devastating effects and consequences bordering on health and welfare just like diseases and plagues, it underscores the need for proactive approaches for its prevention, control, and care for the affected people. Terrorism and diseases take their toll on victims by causing discomfort, pains, and death and deplete resources meant for health through military interventions. Prevention borders on tackling issues associated with human right, neglect at all levels, equity and justice, resource allocation, ethnicity and religious differences, while maintaining good surveillance systems for all categories of weapons and devices associated with terror attack.¹ Use of holistic approach rather than pre-emptive options,

which lead to divisions, should be avoided. The need for development of robust conflict prevention mechanisms and strategies with requisite manpower for conflict prevention services is invaluable.² States should learn to observe and respect the human right of citizens. Its violation has led to conflicts in the past as recorded in Rwanda.³⁻⁵

Terrorism attack is usually directed towards a group of people. It underscores the need for systemic, integrated and multi-sectorial approach in tackling the menace and its health implications.^{6,7} Response activities and interventions should transcend bureaucratic limitations associated with federal, state, and local government agencies, institutions, ethnic, or tribal differences. Emergency interventions should be directly targeted towards the locality affected irrespective of their status, compositions, or background because of the emergency nature of terrorist attacks. Terrorist activities have inflicted economic damages on man and the environment leading to poverty, psychosocial and epidemic outbreaks leading to increased disease burden and death.⁸⁻¹⁰ Legislative measures are essential in straightening out grey areas to forestall complete collapse in case of overwhelming attacks to bridge geopolitical and communication barriers.¹¹⁻¹⁵ Prompt and timely index identification, contact identification, information sharing, and dissemination of ideas with the necessary agencies and organizations are vital for effectiveness of rescue operations. Intensification of surveillance system and health

alerts will further aid prevention and rescue operations.¹⁶⁻¹⁹ Delay in provision of emergency response is ultimately devastating. This study explored the dynamics of terrorism and public health in Nigeria.

Methods

Information for the study were sourced from PubMed, and Google search using the key words individually, and in combination as string of terms with link words. Additional search were made for other authoritative materials and official documents. Only articles written in English Language with logical method and relevant to the subject was used. All documents without proven sources were discarded. A total of 146 relevant articles were found. However, 76 articles met the inclusion criteria for the study. Study lasted from 10 January 2017 to 20 June 2017.

Results and discussion

Terrorist activities and attack lead to water shortage, electricity outage, communication breakdown, varying degrees of water, air, and environmental pollution, food contamination, and sometimes separation of family members. Consideration of environmental epidemiology is essential in considering the impact of terrorist attack on public health. Environmental epidemiology is the totality of all natural, animate and inanimate, tangible and non-tangible things that affects or surrounds any given host. Primary environment affects man and exerts influence and profound effects on man and his family. Secondary environment affects the boundaries of his immediate country that also affect his family, while the tertiary environment is the world that extends into infinite space. However, it may not directly be in contact with man and his family, but it ultimately affects them if it is neglected. Sub-divisions of environment include physical, which can affect man through noise atmospheric pressure, vibrations, ionizing radiations, high and low temperatures, dust, ocean currents, wind systems, and gases. Biological environment viruses, bacteria and parasites that affect man in his environment, animals acting as reservoirs for disease causing organisms, and genetically modified systems. Sociocultural environment borders on the influence of drugs and addictions, food adulterants and contamination, poverty, illiteracy and ignorance, hazardous wastes, stress and life changing events, population explosion, child and intimate partners abuses, wars, and manmade calamities.²⁰⁻²⁵ Terrorist activities can modify the socio-cultural environment directly to affect man and indirectly through the physical and biological environments depending on the levels of attack and manipulations leading to varying levels of public health issues and challenges that impact on human health. Government health policies affect directly or indirectly on all these environmental factors that affects health. It is meant to ensure that all these aspects receive adequate attention while empowering the people to take responsibility for disease prevention and health promotion. However, lopsided distribution or implementation of these policies can take its toll by initiating terrorist activities. Besides, health policies will hardly succeed if they do not seek to bridge gaps or reduce the differences and inequalities in the health status of people. Hence, government policies and inequities can initiate terrorist activities, which negatively affect public health. This aspect is enduring since the people initiating the attack may be from the primary or secondary environment. Good health policies when properly implemented could serve as preventive measures in stemming the tide.²⁶⁻³⁰

Polio eradication has remained elusive in Afghanistan, Nigeria, and Pakistan. These three countries have one thing in common,

“Terrorism”. Since the incidence of “Boko Haram” in northern Nigeria, the lives of immunization officers have been jeopardized leading to distribution of areas of poor and low immunization coverage, and weak surveillance performance. In more than ten years of battle against polio with over \$14 billion USD and global effort down the drain, polio has continued to thrive in Nigeria. On 8 February 2013, gunmen attacked a clinic killing three immunization workers and wounding three. This attack was one of the isolated pair of attacks that led to the death of ten polio-eradicating officers in northern Nigeria in one day. Many of such attacks have been recurrent. This led to the suspension of immunization exercise in some areas pending reduction and control of the terrorist activities. Ever since then, immunization activities have been carried out inconclusively in a manner called “hit and run” in most of the affected areas since the terrorist group started terrorizing northern Nigeria in 2002. Polio and other disease surveillance have been adversely affected leading to disease outbreaks and epidemics in affected areas.³¹ This limitation did not affect polio immunization alone but other childhood immunization activities since the terrorist group is against western education and its dividends. Isolated, sporadic, and mass suicide bombings targeted towards public facilities like, market, mosques, churches, and schools have been common leading to varying levels of disabilities and death.

Abduction and kidnapping of schoolchildren and burning of school facilities in April 2014 led to the withdrawal of support by international organizations. Family members and communities were thrown into states of psychological trauma and distress. The Directorate for International Development (DFID), United States Agency for International Development (USAID), and United Nations International Children’s Fund (UNICEF), withdrew their support from the affected parts of the country leading to poor access and non-availability of essential drugs, consumables, and essential health services.³² It took its toll on educational and health. It has short, medium, and long-term effects on health and health outcomes.³²⁻³⁴ The poor socioeconomic activities in the affected regions have heightened poverty rate, unemployment, and farming activities leading to hunger and malnutrition. It depleted health facilities and their patronage.³⁵ Capital flight has led to the withdrawal of some organizations and companies leading to massive unemployment, loss of revenues and economic life. These have wide spread effects on the nation, its economy and health indices. Increase in poverty reduces access to healthcare, non-availability of essential drugs and essential health services at the primary, secondary, and tertiary healthcare levels. These contributing factors to irrational use of drugs and unethical health practices deplete health indices. No wonder the national health indices have declined markedly since the beginning of the 21st century characterized by marked terrorist activities in Nigeria.^{31,33}

A total of 1595 people were killed by terrorist attack in Nigeria in 2013, and 6118 deaths was recorded because of the activities of a terrorist group in 2014. In 2014, 662 terrorist attacks were recorded. This resulted in the death of 7512 people and 2246 injured. Deaths through clashes with nomadic farmers through indiscriminate grazing has assumed terrorist dimension rising from 63 deaths in 2013 to 1229 in 2014. Syria, Iraq, Afghanistan, and Pakistan accounted for 78% of lives lost globally through terrorist attack in 2014. These countries have also occupied the basement among the committee of nations in terms of health indices and access to healthcare services and escalating levels of poverty since poverty goes with diseases. The citizens of these nations have also lived with increasing fear with the attendant increase in psychological trauma and distress. Psychosomatic illnesses and suicide tendencies have been on the increase.³⁶⁻³⁹

Displacement of people from their primary environment and locality has been a regular occurrence since the advent of terrorist attack in Nigeria. The displaced people end up in internally displaced peoples (IDP) camps while those who cross the borders to neighboring countries end up in refugee camps. The internally displaced person's camps are predominantly made up of women and children in very poor and unhygienic conditions. It serves as breeding ground for epidemics, prostitution, and abuse of illicit drugs. This led to wide spread of sexually transmitted diseases, high incidence of drug addiction, rape, protozoa diseases, and malnutrition. Overcrowding in these camps predispose victims to respiratory tract infections and communicable diseases like tuberculosis, cholera, and diarrhea. The already weak immune status of the victims makes them vulnerable to infections.⁴⁰⁻⁴³

Besides oil exploration, vandalization of oil installations in the Niger Delta region by terrorist groups and militants in south-south Nigeria contributes to varying levels of oil spillage and environmental pollution. Studies on long term exposure to oil spillage showed significant relationship between oil exposure and some short and long-term impact on the physical health of the affected people especially among oil workers who are more exposed to oil spill. Studies suggested growing evidence of mental and community health impact. Many studies, which focused on the impact of oil workers who are most exposed and vulnerable, showed varying manifestations of respiratory symptoms like wheezing, breathlessness and cough; headaches, nausea and vomiting, eye, and throat irritation.⁴⁴⁻⁵¹ Proneness to acute toxicity was interpreted as a function of the level of pollution and the duration of contact. Individual symptoms encountered were dependent on the nature of work done by oil spill cleaners during clean up exercise.⁵²⁻⁵⁵ These are indications of the vulnerability of people and communities lining in areas polluted by oil spillage.

It suggests potential or actual threats to people living in the Niger Delta region of Nigeria. These conditions could manifest with time in varying dimensions. Impacts on mental health of the affected people are less prone to proximity to the areas affected by the oil spill. Effects on mental health were observed after four weeks and include anxiety, depression, and post-traumatic stress disorders. Community members who suffered income loss, loss of farmlands or means of livelihood presented with anxiety, depression, and substance abuse, intra-personal conflict, generalized anxiety disorders, and decreased social visiting.⁵⁶⁻⁶² Vulnerable communities who depended on fishing for their source of livelihood suffered more of anxiety, depression, and posttraumatic stress.⁶³⁻⁶⁶ Children living in coastal areas whose parents businesses were affected by oil spill presented with sleeplessness, fear, and sadness. These were suggestive of mental distress.⁶⁷

Kidnapping or hostage taking is another common manifestation of terrorist activities. Autobiographical account of people taken hostage following kidnapping incidence was similar to experiences during terrorist attack. Victims are exposed to psychological effects like loss of cognition e.g., confusion, loss of concentration, impaired memory, hyper-vigilance, and hyper arousal states.⁶⁸⁻⁷² Emotional disturbances of victims include numbness, anger, fear, anxiety, anhedonia i.e. loss of pleasure in doing things previously pleasurable, depression, and guilt on survival when others lost their lives. Social impacts that ultimately affect health include withdrawal, irritability, extreme stress, and denial i.e. inability to acknowledge the incidence. Frozen flights, loss of emotional reactivity, and psychological infantilism have also been reported.⁷³⁻⁷⁵ These effects could trigger cascades of reactions because

the nuclear family, extended family members, friends, and loved ones of victims are usually affected. The impact could be cyclical and enormous. It is more devastating when prominent community members or breadwinners were affected; they are usually the main target. This is found predominantly in southeast and southwestern Nigeria. These are emerging forms of bio and eco terrorism.

Conclusion

The study explored the relationship between terrorism and public health and brought to the fore the multi-faceted effects of terrorist activities on population health. Terrorism lead to displacement of people, overcrowding, epidemic, destruction of health services and the attendant negative impact on population health. It suggested that terrorism depletes the general living condition of people and predisposes them to varying levels of illnesses, diseases, and ultimately disrupting public health status. Review, implementation of government policies, and equitable resource allocation serve as vital tools to be utilized as preventive strategies. Large population based longitudinal studies, systematic reviews and Meta-analysis will be essential in exploring the dynamics. The issues of religion, culture clashes, ethnic conflicts, and factors that precipitate frustration, narcissistic rage, and deprivation in this era of globalization should be given more holistic and constitutional approach towards addressing the root causes of terrorism. These will be logical ways of addressing and preventing most needless deaths, diseases, and epidemics associated with terrorism in short, medium, and long term.

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Conflicts of interest

The authors declare that there was no conflict of interest.

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