

# An Analysis Of Microbial Diseases: A Non-Traditional Security Threat To Pakistan

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## Abstract

Human on earth seriously suffer from both traditional and non-traditional securities. Current literature generally shifted focus of research from traditional to non-traditional security threats, natural disasters and diseases causes by climatic changes. Pakistan, a third-world country, is no exception; rather, it has been hard hit by natural disasters and their aftereffects, spread of microbial diseases like malaria, polio, dengue, HIV/AIDS, and most recently the coronavirus. This paper selected these microbial diseases for analysis as a non-traditional security threat to Pakistan. The main objective of this paper is to explore causes of microbial diseases and analyze the impact of the outbreak of these diseases in Pakistan. The descriptive approach within the framework of qualitative methodology is adopted to deal with the objectives. The paper claims that natural disasters pose a non-traditional security threats and Pakistan being a developing state with poor health services is comparatively badly affected by the microbial diseases.

**Keywords:** Microbial disease, non-traditional, security, Pakistan

## 1. Introduction

After September 11, 2001, factors such as environmental degradation, globalization, climate change, and microbial diseases converged to develop a new concept of human security: non-traditional security. Since the beginning of the 21st century, National security has remained heavily dependent on the hard power phenomenon. Traditional security issues were given undue consideration to ensure entire national security (Institute of Strategic Studies Islamabad, 2018). The focus shifted away from a military standpoint, changing the outlook for global security in which non-traditional issues emerged with the increasing importance of new variables such as health security, environmental security, economic security, and other societal elements.

Non-traditional security strategy deals with other than military-related security issues. It can be described as using economic, political, and social methods to cope with natural disasters (Raazia, 2015). However, each state's healthcare system is vital in promoting economic prosperity. Improved health standards indirectly increase the impact of economic growth and human development, which increase government financial resources. In developing countries such as Pakistan in South Asia,

communicable syndromes are among the emerging problems currently receiving attention. Previously, pandemics were related to a particular area. However, at present, policymakers in both rich and developing countries have recognized their global importance, thus combining health issues and national security concerns.

Communicable syndromes are an example of non-traditional security concerns that have steadily increased in recent years, threatening the individual security of citizens in Pakistan. In this regard, Baig (2019) has argued that the structure and function of the current healthcare system in Pakistan are far below if compared to international criteria, ranked 122 out of 190 states in terms of health standards, which could pose a threat to the entire security of the state. These measures include political instability, economic collapse, destruction of healthcare infrastructure, and increases in mortality rates.

In addition, states' socioeconomic and environmental problems may worsen as a result of increasing contagious syndromes that are a drain on local economies. After living in denial for a long period, Pakistan and the rest of the world have recently come to terms with the

serious threats from these microbial diseases to national security. This research work primarily clarifies the existing situation of microbial diseases in Pakistan. It further focuses on how these microbial diseases have impacted Pakistan. The descriptive approach within the framework of qualitative methodology is adopted to deal with the objectives. The data is mainly collected from secondary sources such as books, articles, and online sources.

## **2. Non-traditional Security Threats**

In the field of international relations, non-traditional security challenges are nothing new. However, non-traditional security was not treated separately from traditional security threats that dominated the world until the end of the Cold War. Non-traditional threats were not viewed as threats to state security because they related to the security of individuals within the state's borders. Although non-traditional security threats have acquired more attention, territorial security is still a priority of states. Security has become significantly more important in today's society, leading to the establishment and development of numerous new methods such as cooperative security, universal security, human

security, pervasive security, and non-traditional security.

According to Caballero, non-traditional security threats come primarily from non-military sources, such as climate change, drug trafficking, transboundary environmental degradation, resource depletion, natural disasters, infectious diseases, irregular migration, people smuggling, and food shortages. (Mely, 2007). Although these threats come from various non-military sources, they can be distinguished by common characteristics. Because these threats are non-military, they are not limited to national borders, so some may emerge within the country and others outside. Not all countries are necessarily confronted with the same type of dangers. Threats may or may not be common, and each nation has its list. Threats of microbial diseases are spreading rapidly due to globalization brought about by communication and technological advancement.

## **3. Microbial Diseases: An Analysis**

### **3.1 Malaria**

Malaria is a leading cause of morbidity and mortality worldwide and a serious public health issue. Its cases are falling in several African

and Asian countries with successful malaria control initiatives, but little has changed in India, Pakistan, and Bangladesh. More than 80% of Pakistan's population is at risk, putting a heavy strain on the state's economic development (Donnelly, 1997a).

With more than 200 million clinical cases occurring each year, malaria is the most common vector-borne disease in the world. Every year 0.6 million deaths in infants and pregnant women are attributed to malaria. The WHO Global Technical Strategy on Malaria 2016-2030 sets milestones for 2020 that the world is currently not on track to meet (WHO, 2018). The goal for 2020 is to reduce the number of malaria-related deaths and cases by 40%. From 2015 to 2018, the number of malaria cases increased steadily. There are now 214, 217, and 219 million malaria cases worldwide, respectively, up from 2015, 2016, and 2017. Each year Pakistan reports 3.5 million suspected and confirmed malaria cases (WHO, 2017).

Low to the moderate transmission of malaria is endemic in Pakistan. The main occurrence occurs from July to November, which is also the rainy season. The prevalence of malaria fever is higher in rural regions than in urban ones due to the annual heavy monsoon rains and flooding caused

by inadequate sanitation, inefficient waste disposal, and a weak health care system, particularly in rural areas.

### 3.2 Polio

The virus that caused poliomyelitis (family Picornaviridae) is commonly known as polio, the most dreadful of the 20th century. Since the creation of the Global Polio Eradication Initiative in 1988, the prevalence of poliomyelitis has decreased by approximately 99% worldwide. Underwood first described the polio virus in 1789. According to him, it came from the Greek word polio for gray and myeloid for the spinal cord (Underwood is cited in Tara, 2014). Even though the nationwide polio eradication campaign began in 1974, efforts to eradicate polio officially began. In 1994, the disease was still present after 100 rounds of vaccination against polio.

The virus is not present in most nations except in some developing countries like Pakistan. According to the WHO, Pakistan is one of the only two countries where wild poliovirus transmissions still occur. The other one is Afghanistan (WHO, 2020). The polio virus is widespread in contaminated water, where it can be transmitted to humans. Pakistan is

still fighting this contagious disease due to a lack of political resolve and, more importantly, religious groups' misunderstandings about it. With the help of international organizations like the UN, every government is attempting to launch a vaccination program to address this problem. However, there are concerns about moving forward due to shoddy health systems and inconsistent policymaking. In this regard, US\$4.5 million in grants have been given by the Japanese government for the purchase of 22.9 million doses of the oral polio vaccine. These grants aimed to assist Pakistan in protecting over 20 million children under the age of five starting in December 2019 to complete vaccination efforts planned for November 2020. The lack of political resolve to eliminate this threat could also endanger national security for years to come. However, future government action is expected to help eliminate this threat from the state.

### 3.3 Dengue

According to the Oxford English Dictionary, the Swahili phrase "Ka denga pepo" describes a sudden cramp-like seizure originating from an evil spirit or plague, which is the source of the English word 'dengue' (Rigau, 1998). In the 1780s, it was

first medically confirmed that dengue outbreaks occurred simultaneously in Asia, Africa, and North America. The first clinical case dating from 1789 to 1780 epidemic in Philadelphia was reported by Gupta et al.. They invented the term "break-bone fever" due to the presence of arthralgia and myalgia (Gupta, 2012). In many countries, dengue is a rapidly spreading viral disease prone to epidemics. The Flaviviridae family of RNA viruses includes the dengue fever virus (DENV) (Shanthi, 2014). Dengue fever is a chronic disease occurring in Pakistan for about three months a year. This virus emerged in Pakistan in the 1980s and was first identified and considered widespread in Pakistan and neighboring countries in 1994 (Ali, 2017). There have been numerous dengue epidemics across the country, causing serious health problems, fatalities, and other tragic events. There has been a documented increase in outbreaks in several locations since 2010. The deadliest pandemics were reported for the first time in Lahore in 2011, with over 14000 cases and 300 deaths reported (Mukhtar, 2012).

Interestingly, though the geographic area considered appropriate for dengue fever in Pakistan may change slightly, this transmission period is

expected to remain constant until 2070 despite a changing climate (WHO, 2016). There is conflicting evidence as to whether dengue fever cases will increase or decrease. According to some sources, climate change may result in a slight decrease in dengue fever vectorial capacity or the total number of potentially infectious bites from all mosquitoes received by a vulnerable person in a single day (WHO, 2016). Several reports suggest warmer temperatures could expand ideal nesting site conditions (WHO, 2019). Because dengue fever outbreaks are a public health concern, the 2019 outbreak lasted four months (July-November) and resulted in 24,547 illnesses and 75 deaths, and 3,442 cases in 2020. From January 1 to November 25, 2021, 48,906 cases were reported nationwide, including 183 deaths. Cases increased in 2021, particularly in Lahore and the twin cities of Rawalpindi and Islamabad. (International Federation of Red Cross and Red Crescent Societies, 2022). An Emergency Operations Center has been established at the National Institute of Health to continuously monitor the dengue outbreak condition and coordinate information with the provinces' health departments, NGOs, and other relief agencies, including the WHO.

The government is expected to support the health sector in developing vaccines that protect people from contracting the dengue virus.

### **3.4 Covid-19**

The virus was first detected in December 2019 in Wuhan, Hubei, China (Markotter, 2020). At the beginning of 2020, COVID-19 had a significant impact on society. The coronavirus not only endangers human lives but also tears the economy apart. On March 11, 2020, the WHO categorized the virus (WHO Director General's opening remarks at the media briefing on COVID-19, 2020). The origin of the virus is still a mystery. At the Homeland Security Indonesia 2020 conference in Indonesia, a renowned biological weapons expert, Isroil Samiharjo, claimed that up to that point, no research had determined that Covid-19 was a naturally occurring virus.

Numerous nations worldwide have declared a state of emergency to stop the spread of coronavirus. The global economy has experienced significant disruptions and supply chain delays across the globe. This outbreak not only had a significant negative impact on Pakistan's economy and health security but also jeopardized

that country's strategic interests due to the delayed construction of the China-Pakistan Economic Corridor. Jaspal (2020) argues that due to poor emergency response systems, particularly the health system, the spread of SARS-CoV-2 could cause fear in Pakistani society. Fear and concern could lead to civil unrest in this particular environment, and the government should be prepared for a law-and-order situation.

At the beginning of the worldwide pandemic, Pakistan faced difficult choices as two of its four neighbors, Iran and China, were severely affected. Due to their economic interdependence, proximity, and shared cultural heritage, Pakistan, Iran, and China have long had high levels of people-to-people contact, dramatically increasing the risk of disease importation. After visiting Iran, Yahya Jaffry, a 22-year-old man, tested positive for the coronavirus on February 26, 2020, marking Pakistan's first known coronavirus case. As of March 15, 2020, there were fewer than 100 total cases (Dawn, 2020), with the maximum of the diseases spreading amongst Pakistanis coming back from Saudi Arabia, Iran, America, and Europe. Though the number of cases of external infection fell in April, a curve of local transmission of infection began. The total number

of confirmed cases at that time was 555,511, of which 1433 were identified in Zaire and originated from other countries, while the other cases were transmitted locally (COVID-19 Situation).

The WHO's Covid-19 situation report says there have been 11,623 deaths in Pakistan, with a fatality rate of 2.13 percent. While Iran's mortality rate was 4.10 percent with 1,411,731 cases, it was 1.43 percent in India with 10,746,183 cases and 4.36 percent in Afghanistan with 55,023 cases (Covid-19 Weekly Epidemiological Update, 2021). In Pakistan, early government emergency measures, including designating COVID-19 as a public health crisis and a declaration to lock down the state on March 23, 2020 (Pakistan Announces Lockdown of Major Provinces to Curb COVID-19 Spread, 2020), accounted for comparatively few deaths and a lower infection rate during the early phase of the epidemic. However, things started to improve after the lockdown was released on May 9, 2020 (Alvi, 2020). According to Reuter, about 20,000 COVID-19 cases were registered three weeks before the lockdown ceased, but the number of new cases has more than doubled since then (Farooq, 2020). Consumer and commercial activity during Eid greatly contributed to the

unexpected corona cases increase. Similarly, despite the government's official ban on such gatherings, tens of thousands of Pakistani Shias rallied a few days before Eid to attend religious congregations on Yuam-e-Ali, which had augmented COVID-19 cases when people did not carefully heed precautions.

In the country, the number of diseases increased again in November 2020, reaching more than 1000 cases daily (Khan, 2020). This marked the beginning of the second wave of COVID-19 infections in Pakistan. The second wave began during the Gilgit-Baltistan elections due to public gatherings, political rallies, and anti-government demonstrations. However, during the second wave, the government set guidelines for a smart lockdown with lax restrictions rather than a strict lockdown (Chaudhry, 2021).

Most nations, including Spain, South Korea, Italy, and China, had death rates from COVID-19, the highest among people in the 70-79 and 80plus age groups (Mortality Risk of COVID-19 - Our World in Data, n.d.). However, in Pakistan, the 50-59 and 60-69 age groups had the highest casualty rates, while the distribution in other age groups was comparatively more uniform (COVID-19 Live Dashboard – Pakistan). This could indicate that

the state is approaching herd immunity and a relatively reduced mortality rate. However, as the Reuters investigation has shown, there is no guarantee that the concept of herd immunity is effective (Farooq, 2020). To overcome this outbreak, facilities need to be strengthened and developed in the public health sector to eradicate this infectious illness from the nation.

### **3.5 HIV/AIDS**

Until the second half of the 20th century, HIV/AIDS was considered just a health problem. On January 10, 2000, the United Nations Security Council convened the first meeting to declare HIV/AIDS a threat to human security or a type of non-traditional security concern (Fell, September 2006). In 2004, an estimated 39.4 million people were HIV/AIDS positive. This includes 2.2 million children under 15 and 37.2 million adults (15 to 49 years). A total of 3.1 million people died in 2004, meaning about three times as many people die from AIDS-related diseases every day as on September 11, 2001 (Alan, 2007).

This deadly disease has spread across the planet and is no longer unique to sub-Saharan Africa. According to UNAID, between three and 3.5 million people in South Asia are

affected by this deadly disease. In 1987 Pakistan saw its first HIV/AIDS patient (Khanani, 1988). There are only 15,370 known cases of HIV/AIDS in Pakistan. However, approximately 100,000 people live with the disease (Illicit drug trends in Pakistan. The Paris Pact Initiative: a partnership to counter trafficking and consumption of Afghan opiates 2008). The number of reported HIV/AIDS infections in Pakistan has risen alarmingly; from 2005 to 2015, 45,990 cases were registered there, representing the largest global average increase in the history of 17.6 percent (Khan, 2012). The death toll has also risen. The National AIDS Control Program of Pakistan predicts 133,179 people living with HIV/AIDS in Pakistan at the end of 2016, based on prevalence rates from the Integrated Biological and Behavioral Surveillance Round V (UNAIDS HIV Data and Estimates | UNAIDS, n.d.).

The pandemic affects more than just the person with the HIV/AIDS virus; it also affects their families and will subsequently have a multitude of negative economic, political, demographic, and social impacts that require careful planning and management (Hussain.n.d.) The economic impact of such an illness is the inability of those affected to provide for their families and

themselves. In addition, economic activity in areas affected by HIV/AIDS would be reduced or selective. Even worse than the disease is the stigmatization and the associated social isolation of those affected. Three million people die each year from HIV/AIDS, making it one of the top five causes of death quantitatively; that is ten times more than are killed in armed conflict (Alan, 2007).

#### 4. Conclusion

The above debate demonstrates Pakistan's vulnerability to microbial diseases as a non-traditional security threat. In the context of both Pakistan and the rest of the world, non-traditional security is a major concern. It is concluded that these microbial diseases can easily transfer through pathogen agents. The country's monsoon season and frequent floods provide a suitable environment for malaria and dengue mosquitoes, which then increase the rate of diseases. Insecurity has been the major hurdle in recent eradication efforts of polio. Moreover, in Pakistan, there is no proper healthcare structure that results in a reservoir for microbial diseases.

The climatic changes augmented the non-traditional security threats of

many developing countries. In Pakistan, the annual monsoon rains causing floods, inefficient waste disposal, and a weak health care system cause an increase in malaria cases. The dengue epidemic causes serious health problems and fatalities, particularly in Lahore, Rawalpindi, and Islamabad. The COVID-19 fatality rate of 2.13 percent is also recorded as comparatively higher than in other countries like Iran and India. These microbial diseases affect more than just the person; they have many negative economic, demographic, and social impacts. The economic impact of such an illness is the inability of those affected to provide for their families and themselves.

The common thinking of security has changed significantly due to non-traditional security concerns impacting economic, sociological, human, and environmental sectors. The country has given non-traditional security threats a higher priority than before. Therefore, states must work together to address these new, non-traditional security threats due to the increasing interdependence of international politics and globalization. Too little attention is paid to the new human security paradigm, with unresolved

regional issues fueling distrust between countries.

In addition, Pakistan's peace and stability need to address the above microbial diseases. An appropriate mechanism must be implemented to address the non-traditional security threats and inform the public and policymakers. Cooperation must be strengthened both nationally and internationally. Further, governments must invest in the vaccine sector to improve and strengthen the country's health system.

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