

GLOBALIZATION AND COMMUNICABLE DISEASES

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Abstract: Globalization has secured prosperity and has created new opportunities for human development in almost each segment of our modern international community. The 21st century world is dynamic, fast-paced, and greatly interconnected, which makes even the most isolated communities in the world susceptible to global influences. Unfortunately, these influences are not always desirable and positive. History has shown us that increased traffic of people and goods, as well as the rapid social changes caused by globalization, have expanded the list of non-military global security threats, including the threat to health security. Despite the extraordinary medical developments, diseases, especially communicable diseases, have proven to be one of humankind's most dangerous challenges. Some of the factors contributing to the global spread of previously eradicated or localized diseases are lifestyle and social changes, global population growth, crowding in cities and metropolitan areas in certain parts of the world, and mass human migrations, to name a few. These also contribute to the wide array of communicable diseases, the number of which is changing rapidly. Within the international community, human health is connected on a global scale. Globalization has become a lead cause for global health hazards, and the COVID-19 pandemic has demonstrated that communicable diseases know no boundaries and their rapid spread can impact all aspects of society. Thus, the response to such outbreaks needs to be swift, precise, and globally uniform, prompting global activities and efforts to achieve global goals in the prevention and management of communicable diseases.

Keywords: Globalization, Communicable diseases, Health security, Globalization of disease, Pandemic.

Introduction

Communicable diseases are one of the biggest human security challenges. Although there has been huge development in medicine, communicable diseases are becoming a serious international health security threat. The periodical escalation of the communicable disease can create a false impression that humanity has won the battle against them; however, it is a fact that this kind of optimism is constantly overthrown by the occasional reemergence of some of the obviously hidden diseases from the past, as well as the emergence of new and more communicable ones. The increased human mobility in the modern globalized world and all the social, as well as other changes happening as a result of globalization, which have radically changed human life and activity, sound the alarm in the international community on the fast and easy spread of communicable diseases. The number of factors which cause this is huge, but their interconnection with the modern way of life in the globalized world does not open

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much space for serious intervention in order to eliminate them, or to, at least, reduce their consequences. Health security is becoming a serious international security problem which demands a global approach and systemic measures to cope with communicable diseases.

Global changes and the impact of the spread of communicable diseases

Globalization is a process which has a significant impact on the human development in the modern world, where the interdependence and interconnection, as essential elements of globalization, are becoming a crucial necessity of our society and reality. It is "the intensification of worldwide social relations which link distant localities in such way that local happenings are shaped by events occurring many miles away and vice versa". (Giddens, 2003:43). Global changes are accompanied by a series of security problems which have become new threats to the security on a global scale, thus hindering human development, threatening its security, health and even survival. Not a single community of the modern world, regardless how isolated it may seem, is immune to the global impact of the numerous military or non-military security threats. The connection and intertwining of the internal and external politics and security questions and issues suggest that the national political and security problems are becoming more prevalent on the global political agenda, i.e a number of matters of the so called "low" politics (health security, social protection, environmental protection etc.) give rise to international and global concern and action. There are a number of global threats, both international and regional, among which the health security threats are some of the most concerning ones, with special emphasis on communicable diseases.

The global spread of communicable diseases is most often related to migrations and increased social mobility. Isolated human communities are immune to certain types of viruses and bacteria, which are always present in their environment and familiar to their organisms, but when in contact with people from other, more distant environments, these people become exposed to diseases for which they have not gained immunity yet. The plagues of the Roman Empire, the new communicable diseases that were spread through Europe from Asia in the 13th century, and from Europe to America in the 15th century, as well as many other pandemics caused by new viruses, unknown to the native peoples, were a result of the beginning of the increased social mobility and interactions in different parts of the world. The modern global changes are pushing forward to an even higher level of interconnection and dependence of nations and countries, and the constant social mobility and migrations are becoming common characteristics of the times we live in. In the 20th century, along with the appearance of new communicable diseases, we have noticed the reemergence of old, familiar diseases which had not been thoroughly eradicated. Some of those, with the most fatal outcomes and highest contagiousness are tuberculosis, cholera, typhus, smallpox, the Black Cough, meningitis, AIDS and the flu, from which in just two years (1918-1920), 22 million people have died across the world. The increased trade and mobility of people speed up the spread of diseases. In the early 1990s, the communicable strain *Streptococcus pneumoniae* originating from the Spanish docks spread throughout the world in just a few weeks, and the communicable tropical fever spread by mosquitoes in the US in 1998 was completely brought over to the other side of the ocean. (Hough, 2006:188). Also, the AIDS pandemic managed to spread throughout the whole world, and many new viruses have

become a dangerous threat to people, because now they can be transferred from their natural environment to all parts of the world. This is the reason why the spread of communicable diseases has become a global health issue which demands joint forces and engagement of the international health organizations in preventing and coping with them.

Urbanization, overpopulation of cities and poverty are another set of powerful factors which contribute to an easier spread of communicable diseases. The industrialization, which has begun in Europe in the 18th century, and has been blooming in the Global South in the last few decades of the 20th century, has had huge implications in the spread of communicable diseases. The overpopulation of cities (which is a result of the urbanization and industrialization) has caused people to live in poverty, bad sanitary conditions, with bad nutrition and bad health conditions. Such conditions are favorable for the rapid spread of many communicable diseases such as dysentery and cholera. If we add to poverty, the economic stagnation and the political instability present in many developing countries, then this situation is becoming even more alarming, because it reduces the chances to improve the life quality of people and to satisfy their economic, social, health and other needs. The overpopulation which is a result of the high birth rate in some developing countries is further deepening the poverty, thus preventing economic development. It is estimated that around 2 million children annually die of diseases such as smallpox, black cough, poliomyelitis and some other communicable diseases for which there are vaccines, however, due to bad health protection in some developing countries, there is no immunization coverage of the population. The same is the case with the death toll caused by diseases such as malaria and tuberculosis, for which there is a cure, but it is not available to the majority of citizens in these countries. Nevertheless, it is worth mentioning that the industrialization has also caused even the developed countries to become vulnerable to communicable diseases, where due to good health protection there is an increase in the average life span, but a decrease in the birth rate. With the changes in the age structure of the population towards older demographic segments, these countries now have a majority of old population, which is far more vulnerable to the new communicable diseases. The current COVID-19 virus has caused high death rates in many developed countries with developed health systems, just because they have masses of old population, which is far more vulnerable.

Urbanization is also related to the appropriation and cultivation of many wild areas causing pathogens spreading among the urban population (which has never been in contact with them before) and causing new communicable diseases. By deforestation, people “steal” the space which is the natural habitat of many wild animals. Hence, they are forced to live closer to urban areas and be in contact with the people, thus spreading viruses to them, which they are not immune to. In this way, the spreading of tropical diseases such as malaria and leishmaniasis is a result of deforestation, and according to some theories, AIDS and some other communicable diseases were spread among humans by monkeys.

The industrialization and the economic growth are causing changes in the living environment, which can further cause new threats to people’s health. The increase of the average temperature on the Earth is favorable for the spread of some communicable diseases out of their typical environments. Thus, the tropical diseases have already become a global problem, since they are also spreading in areas with moderate climate, as a result of the global warming, which enables the transmitters to multiply more easily and survive in those

areas, which, until recently, have not been their own natural habitats. This is the case with malaria, the West Nile Virus, Legionnaires' disease, Lyme disease and others. Subsequently, the Health Protection Agency of the United Kingdom stated that the Earth got its first victims of communicable diseases, which are result of global warming (Laurence, 2006).

Today, the modern world is facing the biggest crisis caused by the COVID-19 pandemic. Many research centers are emphasizing the fact that the globalized society makes the world more vulnerable to catastrophes compared to the past when the communicable diseases needed months or even years to spread throughout the world, however, today they can be spread in just a few days. The COVID-19 pandemic has illustrated how even the developed health systems in the rich countries could not prevent the spread of the virus. According to the 2020 United Nations Development Program, the spread of the virus is least dependent on the development of the health systems, but mostly on other factors such as: the density of the population, the dependence on public transport, the length of the distance from home to work, public gatherings, personal hygiene, the standard of living et cetera. The success of the prescribed measures for preventing the spread of the virus depends on the level of human development in the countries (life expectancy, education, equality, living standard, good social protection system, developed economy, lack of poverty and similar), but mostly it depends on the quality of the countries' institutions and the citizens' trust in them.

Review on the spread of communicable diseases through the history

Humanity has been through huge number of pandemics. These are outbreaks of communicable diseases which cross over international borders, targeting people on a global scale. According to WHO, viruses most usually originate from animals, which are the primal transmitters; however, once they infect humans, the virus starts to be transmitted directly among them. The increase of contacts between people, movements and migrations, results in higher chances of spreading the virus between the populations. Dr. Keiji Fukuda describes the pandemic as a global outbreak which is characterized by the fast spread of the virus and the disease activity (WHO, 2009).

It means that there is a global spread of communicable diseases and it is normal to ask ourselves which was the most common factor that caused the previous pandemics and which are the conclusions to be drawn regarding our current and future pandemics.

The Antonine Plague, which first appeared on the Italian Peninsula in 165 C.E. was spread by soldiers coming back from the Middle East, and infected five million people out of whom one quarter died (<http://bbc.co.uk/2/hi/health/4381924.stm>). The Plague of Justinian appeared in Egypt in 541 C.E., and as a result of the travels and activities of the soldiers, in one year it reached Constantinople and engulfed the whole of Europe. This plague eliminated half of the human population in the known world and lasted for approximately 750 years (<http://science.nationalgeographic.com>).

In 1348, Italian merchants running away from the battles on the Crimea spread the new plague in Europe, called the Black Death. The plague started in Asia, through the Mediterranean, spread to Western Europe, where it killed one third of the population in just three months. Until the 18th century in Europe there had been more than a hundred plague outbreaks (Revill, 2008).

Typhus appeared in the time of the Crusades, but spread through Europe in 1489, first in Spain during the battles between Spain's Christians and the Muslims of Granada. In the following wars, including the Second World War, soldiers were the main transmitters of the

disease and by 1914, the number of casualties from typhus was higher than the casualties of war activities in the First World War.

In the 16th century, the contacts between the European explorers and the population in the parts of the world where they had been exploring, contributed to the spread of epidemics on a larger scale, where the natives (The Canary Islands, Hispaniola, Mexico, Peru) suffered losses, to the advantage for the invaders.

Smallpox was brought to Mexico by the Europeans. In just one year (1618-1619) smallpox killed 90% of the native population in the Massachusetts Bay. It is estimated that the death of 95% of the native population on the American continent was a result of the infection with smallpox and flu, viruses which had been brought by the Europeans, who were immune because of their previously achieved herd immunity. In 1789, the pox brought by the European settlers in Australia, destroyed the Aborigine and Maori native peoples, and in 1848-49, 150000 Hawaiians were infected with pox, whooping cough and flu, which caused 40,000 deaths. The diseases brought to Easter Island, Fiji and Ainu Islands by the Japanese settlers coming to Hokaido, swept away the native populations. (timeasia.com, 2000)

Many researchers argue that syphilis was brought from the New World to Europe after the journeys of Columbo, which in the Renaissance period was the number one killer in Europe. Moreover, in the period between 1602 and 1796, a Dutch company from East India sent about 1 million Europeans to work in Asia, of whom 70% died due to communicable diseases for which the Asian population had had herd immunity.

Cholera spread in the 19th century and killed dozens of millions of people across the world. It appeared in Bengal in 1817 and by 1820 spread across the whole of India. It spread in stages until 1975. In 1824 it spread through China, Indonesia and the Caspian Sea, and then, in 1837 it also appeared in Russia, Hungary, Germany, The United Kingdom, France, Canada and the United States of America. In its third stage (1846-1860) it affected Spain and Mexico, in the fourth stage (1863-1875) it spread in Europe and Africa, and by 1975 it also spread in South America, Japan, Persia and Central America.

Malaria spreads in tropical and subtropical regions, and it is presumed that it contributed to the fall of the Roman Empire. In America, it was brought by merchants and slaves and it became a serious threat for the colonizers as well as the native population. Annually, 350 to 500 million people are infected with malaria.

The massive movements of the armies in the First World War and the improved transportation systems, caused the spread and mutation of the Spanish Flu which infected half a billion people across the world, reaching even the remote Pacific islands and the Arctic. In the period between October 2004 and February 2005, a laboratory in the USA unexpectedly distributed about 3700 testing kits for the Asian flu virus of 1975. Despite the threat of a global flu pandemic for which the scientific community instantly sent an alert, by November 2007, the disease was recognized in many parts of the world, but resulted in only 59 deaths.

The Corona Viruses are a big virus family, which causes mild or severe forms of respiratory syndromes (MERS-CoV, SARS-CoV-1 and the new strain SARS-CoV-2 which appeared in 2019 also known as COVID-19).

In March 2020, the WHO declared a global pandemic with the new COVID-19 virus which was first identified in Wuhan in December 2019, spreading rapidly in more than 200 countries across the world, and by the beginning of 2021 infected 100,884,143 people out of

which 2,167,328 have died. By April 20, 2021, the number of infected people in the world was 140 million.

It is obvious that despite the number of factors that have an impact on the speed of transmission of the communicable diseases, the mobility of people as an essential characteristic of the globalization is the biggest contributor to the worst-case scenario when it comes to a communicable disease, which is the spread in pandemic proportions. The chances for outbreaks of communicable diseases have been present even at the beginning of the development of the civilizations, but with the establishment of intensified relations between people from different regions, the crossing of borders, the development of the means of transport, which ease human activity, the chances of spreading and growth of diseases in pandemics have significantly increased. If the Antonine Plague infected 5 million people in 15 years and remained localized only in the Italian Peninsula, the current COVID-19 virus in just one year spread through all the continents and infected 140 million people. If in the oldest human civilizations, the diseases spread mostly between the armies in their campaigns in other regions, this was later done by the colonizers and the merchants, and today, when people travel everywhere in the world, everybody can be a transmitter of a disease. With the fast and massive activity of people, the chances of spreading communicable diseases with the help of travelers have become a global public health and security problem. The global spread of communicable diseases is in close correlation with the human activity caused by the development, interdependence and the need for communication in every segment of the social living and functioning. According to this, even the most isolated communities in the world are not immune to the global spread of communicable diseases, because the health of humanity is now globally connected, and the virus can travel from one end of the world to another in just one day.

Assumptions on future risks of pandemics

Ever since the emergence of the first civilizations, the possibilities of spreading infectious diseases have been ripe. However, as relationships between peoples of different parts of the world intensified, the chances of the spread increased, and the rate and speed of contagion rose. Humankind knows many health crises caused by the worldwide spread of infectious diseases. This current COVID-19 crisis will certainly not be the last health crisis. The end of the pandemic caused by the rapid spread of this virus is not yet within sight. Globalization has increased our opportunities for travel, development, and communication across borders, but it has also uncovered its side-effects, including easy and rapid spread of infectious diseases, and a vast number of negative consequences on the economy and society at large. Many experts believe that the influence on countries' economies will be far larger than what has been estimated thus far and that the world is tracking towards the most severe economic crisis the world has yet to face (Djukanovikj, 2020:67). Being faced with this double crisis of both health and economy means that countries will be placed in a position where they are spending enormous amounts of resources and need to decide whether to prioritize health security or support economic development (Dronzina, 2020:54). In its Global Risks Report, the World Economic forum states that should the pandemic cause a global economic crisis, there would be detrimental consequences on globalization, leading to a rise in militarism and authoritarian regimes around the world. In turn, this would cause

an additional strain on the weakened global economy, transforming the health and economic crises into a security issue that requires a global response through collaboration, and joint strategies and initiatives. This transformation is further made possible due to the fact that during this health crisis, existing security challenges, such as terrorism, climate change, cyber-security, crime, illegal migration, are being overshadowed. However, countries need to remain vigilant and aware of the presence of these threats, even during times of pandemic. Government policies need to keep focusing on these threats, while prioritizing the current health crisis (Dronzina, 2020:54).

According to the UNDP, the COVID-19 health crisis does not only pose a threat to human health, but is also a systematic crisis of human development in the globalized world, and even more, a consequence of the disruption of our interaction with nature and its ecosystem, the unsustainable inequality between people, and the unsustainable economic activity. Thus, the need arises for a more adequate human development policy, which will include measures for increasing crisis resiliency and will develop and strengthen the crisis management and resolution capacities continually. These measures need to enable citizens and societies to receive greater protections and prompt rehabilitation from crises. In this process, countries at a higher level of human development (more efficient public institutions, more versatile economies, more robust systems of social protection, higher living standards, quality education, longer life spans, lower inequality and poverty rates, etc.) are generally better positioned to respond to these novel challenges and rehabilitate at a quicker pace. The current pandemic has demonstrated that no single country was at a sufficient level of preparedness to respond to a crisis of such intensity, but also that there are grave discrepancies between developed and developing countries in terms of health system preparedness (size of medical personal, number of hospital beds, and percentage of GDP allocated to the health system). The capacity of a health system to manage such crisis is essential, and it is merely one piece in the string of indicators that determine a country's preparedness to respond to a pandemic that took the world by surprise with its virulence and posed a challenge for authorities attempting to determine the scope of the issue. Securing medical supplies and machines will depend on the flexibility of the industry and commerce, and on the political leadership and decision-making structure, or more succinctly on the quality of the country's leadership and institutions (Kovachevikj, 2020).

According to the 2019 Global Health Security Index the global preparedness to manage epidemics and pandemics is low, scoring 40.2 points out of a maximum of 100, while the same index in more developed countries is 51.9. The national health security is likewise underwhelming and no single country is fully capable of dealing with epidemics and pandemics, or global catastrophes of a biological nature (<http://mia.mk/indeks-za-globalna-zdravstvena-bezbednost>).

Since globalization has increased the world's vulnerability to catastrophes and crises such as the global health crisis caused by the COVID-19 virus, prevention against such crises and catastrophes need also be a global responsibility for cooperation and solidarity of all countries. Globalization is a continuing process and will not cease. This pandemic has demonstrated that borders cannot be closed for long periods, nor will people cease to travel across borders. The interconnectedness has reached levels and proportions that closing borders or prohibiting movement of people would severely disrupt or even destroy countries' economies and even their societal development. However, it is this interconnectedness that

could strengthen the awareness of the need for unity in creating prevention strategies against future risks and spreads of infectious diseases, as well as strategies for lowering vulnerability levels and people's exposure to these risks. The fact that each country is facing the same threats should unite them in the effort to limit the spread of the disease, mitigate the consequences on societies, and suppress the danger through solidarity and humane approach towards those who do not have the capacity to withstand the social and economic pressures and undertake the necessary measures.

Conclusion

This globalized world is dynamic and interdependent, each occurrence anywhere in the world causing a ripple effect worldwide. No country or person is immune to global influences. The ease of transport, economic and commercial connections and interrelated, and rapid and mass movement of people has contributed to spreading of diseases becoming a global issue. Regarding health indicators, there are significant discrepancies between developed and developing countries. However, all countries are facing the same issues and challenges in conditions where people's health is impacted by global events. Environmental changes, overpopulation, and mass migration and travel influence the spreading of disease, easing the spread through both people and animals. Climate change, the unsustainable exploitation of natural resources, soil degradation, and other global issues change the ecosystem and increase the spread of diseases to which we are not immune. Identification of new infectious diseases and prevention of global pandemics necessitate a global collaboration, since results can only be achieved through purposeful and coordinated action of all international organizations and national health and security systems.

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