Review Article

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COVID-19 pandemic reflections in philately**[Filatelide COVID-19 pandemisinin yansımaları]**

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Abstract: Contagious diseases have always been a big challenge for so many civilizations in the past and they resulted in numerous numbers of death and big historical changes. Also so many contagious diseases which have been thought to be eradicated still continue to have mutations and endanger health. COVID-19(SARS-CoV-2) endemic started in the city of Wuhan, China in December 2019 and turned into a pandemic in a short time. When we look at the history, we see many other corona virus types (e.g. SARS, MERS) causing pandemic. This article provides an overview of the history and progression of the coronavirus through the COVID-19 outbreak, which is rapidly spreading and posing a threat. In addition, it is aimed to thank all healthcare professionals who work with great sacrifice all over the world during the COVID-19 Pandemic process and to use stamps, which are a great cultural treasure in terms of public health awareness.

Keywords: COVID-19; history of coronavirus; MERS; philately; SARS.

Öz: Salgın hastalıkların çağlar boyunca medeniyetleri kökünden sarsan, kitlesel ölümlere ve tarihi değişikliklere neden olan etkileri olmuştur. Yeryüzünden silindiği düşünülen salgın hastalıkların birçoğu mutasyona uğrayarak

insanların hayatlarını tehdit etmeye devam etmektedir. Aralık 2019'da Çin'in Hubei eyaleti Wuhan kentinde çıkan yeni COVID-19 (SARS-CoV-2) salgını epidemi şeklinde başlayarak, kısa zaman içinde pandemiye dönüşmüştür. Tarihe baktığımızda birçok farklı koronavirüs tipinin (SARS, MERS gibi) salgınlara neden olduğunu görüyoruz. Bu makalede hızlı yayılımı ve tehdit oluşturma durumu devam eden COVID-19 salgını aracılığıyla koronavirüs tarihine ve ilerleme sürecine genel bir bakış sunulmaktadır. Ayrıca makale yoluyla COVID-19 Pandemi sürecinde tüm dünyada büyük fedakarlıklar ile çalışan tüm sağlık çalışanlarına teşekkür etmek ve halk sağlığı farkındalığı açısından büyük bir kültür hazinesi olan pulları kullanmak amaçlanmıştır.

Anahtar Kelimeler: COVID-19; Filateli; Koronavirüs tarihi; MERS; SARS.

Introduction

Although the history of pandemic dates back to the period when human domesticated plants and animals, it is assessed from many aspects in terms of spread processes and results [1]. The concept of pandemic is defined as the easy and fast transmission of epidemics causing diseases and deaths in people or animals, sometimes to a continent or even to the whole globe [2].

Epidemic diseases were not common in the periods when people lived in small, isolated communities and this changed with the transition of hunter-gatherer societies to permanent settlement by starting agriculture [1, 3]. The hunter-gatherer life continued until approximately 10 thousand years ago. We see that people adopted a settled life with the agricultural revolution. After this stage, radical changes and transformations have been experienced in human life [4]. In the settled order of human societies, animal pathogens reached humans through ways like milk, meat, saliva and excrement as the domestication of animals. With the mutations these pathogens are subjected to in

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the host organism and their transmission from human to human, they have become infectious diseases. Through the discovery of new intercontinental trade routes or military wars, these infectious diseases have matured the conditions leading to the pandemic [1, 3]. Pandemics, on the other hand, have not been limited to the deaths of millions of people, but also have shaped political and social life and have caused historical changes. For this reason, epidemics should be examined as a social phenomenon affecting many economic, social and diplomatic areas [5].

Since human beings could not understand the cause of epidemic diseases in ancient times, they totally accepted the deaths caused by them as supernatural forces. Since they perceived epidemics as punishment, magic or evil spirits, they tried to take measures by praying to their gods and giving sacrifices [6]. Today, these diseases are associated with factors such as population growth, unplanned urbanization, unhealthy food consumption, radiation, globalization, air pollution and the development of pathogenic resistance to antibiotics due to misuse [5]. The nature, balance of which we have disturbed, constantly reminds humanity of its power in an unpredictable way and often dishes out many epidemics, which put human beings in danger [7].

The epidemics, which have been seen as an existential threat by many civilizations for centuries, have still continued to pose a threat to people's lives by renewing themselves under today's conditions. At the present time, a new epidemic disease is identified one every two or three years [2]. However, no epidemic experienced by humanity has resulted in medical, scientific, social, economic, and political responses as swift, large, and global as COVID-19 [8] (Figures 1 and 2).

Figure 1: This postage stamp from Bosnia and Herzegovina (0.90 M) depicts the structure of two COVID-19 viruses as two zeros in 2020.

When some of the major pandemics caused by the epidemic diseases are examined historically, the most effective ones can be regarded as plague (black death) epidemic in 1,347–1,351 (It is believed that this epidemic destroyed approximately 30–50% of the European population), Smallpox epidemic in 1,520, Spanish flu (influenza pandemic) in 1918–1919 (It is believed that 1/3 of the world's population caught this disease and almost 50 million people died), HIV/AIDS, which started in 1981 and is still continuing, SARS seen in 2002–2003, Swine Influenza Virus (SIV/H1N1) seen in 2009–2010, MERS seen in 2012, and Ebola outbreak seen in 2014–2016 [9]. Flu epidemics appear in all world societies with a repetitive and unpredictable characteristic. It has been recorded that flu epidemics have relapse three times once in every century since the 1500s. There were three other major flu epidemics apart from Spanish flu, which is the most effective and devastating epidemic, “Asian flu” in 1957–1958 and “Hong Kong flu” in 1968–1969 [5]. COVID-19 pandemic, which is experienced as the last active pandemic and continues its rapid spread and threat, started in Wuhan city of China in December 2019 [9]. This article contains medical philatelic materials used to commemorate important historical events and raise public awareness of their broad social impact. As in previous pandemics, governments have resorted to philately combat and commemorate the epidemic during the COVID-19 process. Governments have often used stamps to signify their determination to reassure their people, educate and motivate their public health practices. To this end, the first COVID-19 stamp was issued by Iran on 17 March and then by China on 11 May, immediately after the initial isolation and identification of SARS-CoV-2. It is seen that all countries have similarly published historical stamps that they refer to the COVID-19 Pandemic struggle in visual memory. In general terms in philatelic materials; doctors, nurses, health personnel, scientists, patients, soldiers, police, firefighters, virus, symptoms, ways of protection and precautions to be taken are depicted [8]. Therefore, the stamps used in this article, together with other data sources, present the effects of a special period in medicine, art, social and historical fields on the memory of humanity (Figures 3 and 4).

SARS (SARS-CoV)

Severe Acute Respiratory Syndrome, which is the first international emergency health condition of the 21st century, was first reported in the Guangdong region of China in November 2002. SARS, which is a disease with high infectiousness and mortality, spread to Hong Kong in a

Pandémie de Covid-19:
Merci au personnel
de première ligne

1200FD

Figure 4: The stamp from Djibouti, 2020 depicts medical staff with the mask. One of them carries a child and the other one tries to survive the patient.

short time and then spread to East Asia, North America and Europe with travelers [10]. Since SARS-CoV-1, which is normally found in bats, is not directly transmitted from bats to humans, its mutation has been tried to be explained by scientists as the mutation made in a laboratory environment or a natural mutation forming in a palm civet cat. In the end, it is found in both mutations that the ecological balance is disturbed by humans for infection [11]. It was then transmitted from person to person through droplets and a serious spread occurred. This repeats similarly in the pandemic we are experiencing today. Although SARS pandemic was limited with the precautions, the pandemic spread to 37 countries and 916 deaths and 8,422 cases were seen worldwide [12] (Figure 5).

MERS (MERS-CoV) (2015–currently)

MERS (Middle East Respiratory Syndrome) (2015–currently) is a coronavirus (MERS-CoV) infection. MERS, first seen in Saudi Arabia in 2012, is a disease having high rate of fatality and can be seen at all ages. According to the report published by WHO in November 2019, laboratory-confirmed MERS-CoV infections were determined in 2,494 patients

Figure 5: The People's Republic of China published in 2003 “the fight against SARS” (severe acute respiratory syndrome) stamp. Campaign to combat the epidemic of SARS.

since September 2012 [13]. However, as a result of retrospective studies, it was determined that the first known cases were reported in Jordan in April 2012. The greatest known spread of MERS apart from Arabian Peninsula took place in the Republic of Korea in 2015, when one person from abroad caused the epidemic [11]. MERS-CoV infection, which is transmitted from person to person through close contact and show symptoms with fever, cough and shortness of breath, causes epidemics especially in the spring. However, since it can cause infection throughout the year, it is important to take protection and control measures [12]. MERS cases have been seen in 27 countries around the world and a total of 858 deaths caused by this disease have been reported [13].

COVID-19 (SARS-CoV-2) (2019–currently)

COVID-19 (SARS-CoV-2) pandemic is the first global crisis of the 21st century affecting all humanity. The World Health Organization (WHO) reported pneumonia cases in Wuhan city of Hubei province in China in December 31, 2019 and a novel coronavirus, which was not detected in human beings before, was identified in January 5, 2020 [7]. This disease originally expressed as 2019-nCoV was later named as COVID-19 (SARS-CoV-2). It was named after “Corona”, which means crown in Latin and 2002 (SARS-CoV) and 2012 (MERS) were reported to be caused by coronaviruses [13].

Figure 6: Chad depicts an unperforated souvenir sheet of four from 2020 fighting against COVID-19, researches and Dr. Tedros Adhanom Ghebreyesus, the director-general of WHO.

After COVID-19 epidemic (2019–currently) seen in China, it influenced the whole world in a short time like three months [7]. While the highest morbidity and mortality rates were reported from China in approximately the first two months period after the outbreak of the disease, the number of cases and deaths in China decreased since the first week of March 2020. However, morbidity and mortality rates increased in all continents on which human beings live, except for Antarctica. WHO declared COVID-19 as a global pandemic on March 11, 2020 [14]. The first death caused by COVID-19 disease was reported on January 11, 2020. The first case other than China was reported from Thailand on January 13, 2020. After that, the first cases were reported from Japan on January 16, 2020 and from South Korea on January 19, 2020. Afterwards, the disease spread rapidly and Iran, Italy, France and Spain were among the first countries affected after China [13]. The first COVID-19 case in Turkey was reported on March 10, 2020 and the first death due to the disease was reported on March 17, 2020 [14] (Figures 6 and 7).

Although the origin of the causative of COVID-19 disease has not yet been precisely identified, epidemiologically the first cases are associated with the Huanan Seafood Wholesale Market, the livestock and seafood market in Wuhan. While there are predictions that the disease is transmitted from bats to humans, there are also opinions that there is an intermediate host between bats and humans and this host is pangolin (anteater) and the new coronavirus may have emerged with the recombination of bat and pangolin coronaviruses. Although the disease is accepted to have zoonotic origin, the presence of its transmission from human to human has also been shown and has become the main infection way. The mode of

transmission from an infected person to a susceptible person is accepted to be respiratory secretions. After being exposed to infectious droplets released by an infected person or indirectly carrying the agent to the mouth, nose and eye mucosa after the contact with the contaminated skin and surfaces, infection may occur [7, 14].

COVID-19 continues to threaten the people physically, mentally and socially [7]. WHO, [Centers for Disease Control and Prevention (CDC)], [European Center for Disease Prevention and Control (ECDC)] and the General Directorate of Public Health of the Ministry of Health in Turkey has determined the time recommended to monitor and kept the suspected patients in quarantine as 14 days [14] (Figure 8).

The virus is transmitted from human to human by breathing and taking droplets containing virus in the air or on the surfaces into the body. The infection carrier person distributes viruses to the environment by breathing, speaking, sneezing, coughing and the viruses can stay alive for a while in terms of environmental conditions even if the infectious person goes, if the environment is not ventilated, the virions continue to be present in the environment and if another person comes to that place within this period, he/she may be infected with the virus [15] (Figure 9).

Coronaviruses have a genome containing with single stranded positive sense RNA. They do not have metabolism, they live lifelessly by crystallizing outside the cell, when they reach the appropriate cell, and they leave their genomes inside the cell and have the cell to make their copies, the cell bursts, and the newly produced viruses move towards other cells. Viruses are smaller than bacteria and consist of a small number of atoms. A tiny droplet of a sneeze may contain trillions of viruses [16] (Figure 10).

Figure 7: On 30th April 2020, Croatian post issued a cancellation for COVID-19 with a structure of the virus.

Figure 8: On 29th May 2020, Slovakia post issued a cancellation for COVID-19 with a structure of the virus (Our Lady of sorrows protects us against corona virus). Infection and symptoms caused by COVID-19.

Figure 9: Brazilian post depicts the symptoms of COVID-19 on their stamp.

The disease is characterized by sudden high fever, cough and shortness of breath after the incubation period of 2–14 days. Sore throat and runny nose have also been seen in some patients. The disease generally shows a moderate to severe clinical course. Complications of the disease have been reported as severe pneumonia, septic shock, acute respiratory distress syndrome (ARDS), multiple organ failure, and death [15] (Figure 11).

COVID-19 and mental health

Epidemics cause individuals and societies to experience psycho-social problems. During epidemic periods, people may experience situations like getting sick, fear of death, helplessness, anxiety, concern, panic and stigma [17]. Articles have been published in the literature considering the possibility that the virus may have fatal effect on mental health as much as its fatal effect on human body. In addition, the studies have reported that COVID-19 pandemic triggers mental health crisis in people. It is reported in surveys that one out of every three citizens in the USA has a clinical depression and anxiety [18].

Many developed countries have tended to take priority to protect especially the elderly people, the groups having comorbidities and the most vulnerable disadvantaged groups in the fight with COVID-19 [19]. In Turkey, a number of protection decisions have been taken for the population aged 65 and over and those below the age of 18 who are defined as the disadvantaged group thought to have high risk. These decisions include a number of protective measures such as curfew applied on March 21, 2020 for the group defined as disadvantaged, unlike the other members of the society [20]. However, the physical distance measures emphasized for elderly people were replaced with social distance and isolation and the emphasis on “risky for elderly” has been

Figure 10: On the maxima-card (postcard) from Switzerland in April 2020 with a surcharge postage stamp (1.00 + 5.00 SvFr) was issued in the sheets of 10 stamps, depicts the symbolism of the medical cross and the population of people with raised hands and the call for solidarity with the affected COVID-19 virus in four languages: “COVID-19/solidaridad/solidarietà/solidarité/Solidarität”.

Figure 11: The sheet from Palau with four stamps depicts medical staff around the world, shows respect, and sends tribute to the front liners in 2020.

changed to “dangerous elderly” [21]. The effects of this situation, which has turned into a global discourse and social stigma in a short time, are predicted to be as devastating on the elderly population as the pandemic [17, 22].

Some estimations in the literature show that deaths caused by mental or spiritual health can be compared with

those who died directly due to the effects of the virus. Some research results in the USA predict that deaths may occur due to the reasons such as hopelessness, mass unemployment, social isolation, depression, anxiety disorder triggered by COVID-19, along with those who died from COVID-19 [23] (Figures 12 and 13).

Figure 12: Kyrgyzstan post office depicts the structure of the virus and a cat (leopard) in 2020. Stop COVID.

Figure 13: An unperforated sheet from Syria depicts the structure of the virus and health army symbolized with a stethoscope.

Current situation in COVID-19

Many efforts have been made to develop COVID-19 vaccines. Determining international funding mechanisms to support the development and production of COVID-19 vaccines has become a universal priority [24]. A number of different vaccination types have been developed for COVID-19 pandemic. These are inactive vaccines, live attenuated vaccines, protein-based vaccines that mimic the structure of COVID-19 virus, viral vector vaccines and m-RNA and DNA vaccines, which are the latest technology approaches. All of the developed vaccines were designed to introduce the virus causing COVID-19 to the body's immune system safely and to teach how to destroy it (Figure 14).

During COVID-19 pandemic period, along with the development and application strategies of vaccines, the need for proven public health strategies such as physical distance, early diagnosis, isolation when necessary and epidemic control still continues [24].

According to WHO, 4,507,837 deaths (31.09.2021) and 216,867,420 COVID-19 cases have been reported globally. As of August 29, 2021, a total of 5,019,907,027 vaccine doses have been administered all over the world [25]. According to the data of the Ministry of Health, the number of COVID-19 vaccinations in Turkey is reported to be 94,251,482 (01.09.2021) [26]. As of today, a total of

6,366,438 COVID-19 cases and 56,458 death cases (27.09.2021) have been reported in Turkey [25]. COVID-19 pandemic is continuing in the whole world with the loss of many people, their psychosocial and economic collapses and the non-recoverable traces it left [25] (Figure 15).

Figure 14: The cancellation from the Republic of the Turkish post office for medicine feast remember us of COVID-19 structure and vaccination.

Figure 15: Sao Tome and Principe souvenir sheet depicts people over the world. It sows fighting against the virus together, hand in hand.

Conclusions

In this article it is aimed to investigate pandemics not only with physical health approach but also social, economic and psychological components. This is of great importance since such topical philately is considered not only a collection of nice pieces of stamps, but also signify the cultural history, concerns, pride, struggles, achievements, and triumphs of the period. Thus, such a collection has educational impact and value which will be carried over centuries in the medical history. With this aim, different types of coronaviruses are presented with different philatelic material.

Epidemics, which have been seen as an existential threat for centuries in history of humanity, have caused mass deaths and even changes in the world history. Epidemics, which are thought to be eliminated from the world today, are seen to continue to threaten people's lives by renewing themselves. COVID-19, which is experienced as the last active pandemic and continues its rapid spread and threat, started in the Wuhan province of China on December 2019. COVID-19 outbreak started as an epidemic and has turned into a pandemic in a short time.

Severe Acute Respiratory Syndrome (SARSCoV) disease that was never seen before and is from coronavirus family between 2002 and 2003 and the Middle East Respiratory

Syndrome (MERS-CoV) that is also from coronavirus family between 2012 and 2013 affected many countries. The coronavirus seen in 2019 was named as COVID-19(SARS-CoV-2) different from the previous known coronaviruses. Pandemic, which has much more devastating effects than previous coronaviruses, continues to show its effects and changes not only in the field of health but also in many areas such as economic, social, cultural, demographic, transportation, tourism, sports, arts and education in particular.

Pandemics have changed the life style of human being as phenomena guiding the political and social life in every period and still continue to change. It is likely that pandemics and epidemics from the past to the future will be experienced as in the past and today. In line with this reality, health infrastructures, social policy formations and strategies that will already respond to pandemic crisis globally should be developed and made available. In fact, COVID-19 pandemic has taken its place in the history as a pandemic that revealed the non-preparation and inadequacy of all world countries and organizations including WHO, the global health authority to fight with this crisis.

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