Infectious Diseases Epidemics (Hawar / The Plague) In Islamic History in The Middle Ages and Its Effects on Socioeconomic Aspects

Wan Kamal Mujani¹, Mohd Izhar Ariff Mohd Kashim², Nur Asmadayana Hasim³, Lenny Suryani Safri¹, Nurul Ilyana Muhd Adnan¹ and Kipli Yassin⁶

Abstract

The COVID-19 pandemic, which began in China in late 2019 and swiftly spread globally, has had a profound impact, infecting 188 countries and causing significant mortality. As of May 28, 2020, over 5.7 million cases and 356,131 deaths were reported worldwide, with the United States, Brazil, and Russia among the hardest-hit. Despite the absence of a definitive cure, treatments involve antibiotics and intensive care. Interestingly, pandemics are not unprecedented. Historical records reveal similar outbreaks, such as the Black Death in the Middle Ages, which originated in Central Asia and spread globally, including to the Middle East during the Mamluk Kingdom. This research objectives is to focus on the socioeconomic impact of the Plague in Egypt and Syria during this period. Understanding these historical precedents provides valuable insights into managing and mitigating the effects of current and future pandemics. This research is conducted by using qualitative descriptive literature review. The result of shown It caused difficulties for the government, aristocracy and bourgeois, ordinary people, farmers, manufacturers, entrepreneurs, traders, and workers. It also drove many deaths among the population, loss of jobs and livelihoods, high demand, raised prices of goods and wage rates, and declined productivity. In essence, this study underscores the importance of historical context in addressing current and future pandemics, emphasizing that lessons from the past can guide us toward more resilient and informed responses.

Keywords: Outbreak, Pandemics, Socioeconomic, Historical Context

INTRODUCTION

The world was shocked by the devastating outbreak of COVID-19 that began to hit China at the end of 2019 and then drastically dispersed to countries in Europe, Asia, America, and Africa. The COVID-19 epidemic infected 188 countries and yielded a high death rate in most of the countries it infected (Norkhair et al. (2023); Noor Inayah et al., 2011). As of this writing, on May 28, 2020, the Coronavirus Resource Center, Johns Hopkins University (2020) reported and confirmed 5,716,570 cases of Coronavirus worldwide, resulting in 356,131 deaths. Top ten countries that struggled with this viral and horrible epidemic with the highest number of cases were the United States (1,699,933 cases), Brazil (411,821 cases), Russia (379,051 cases), the United Kingdom (268,620 cases), Spain (236,259 cases), Italy (231,139 cases), France (183,038 cases), Germany (181,918 cases), Turkey (159,797 cases) and India (159,797 cases). The top ten countries with the highest number of deaths were the United States (100,442), the United Kingdom (37,542), Italy (33,072), France (28,599), Spain (27,117), Brazil (25,598), Belgium (9,388), Mexico (8,597), Germany (8,449) and Iran (7,627). Until now, there has been no cure or explicit medicine to treat and cure the disease of COVID-19. The only treatments given are antibiotics and intensive care by specialist doctors.

Interestingly, many people are unaware that this epidemic that has claimed hundreds of thousands of people's lives is not a new thing because historical records have documented similar outbreaks that have already occurred in Islamic history since the beginning of Islam, especially in the Middle Ages. The Plague, known as al-Mawt al-
Aswad or The Black Death, originated in the East (Central Asia), also spread in most regions of the world then and resulted in many casualties (Noor Inayah et al., 2011). It was endemic initially and then became an epidemic and a pandemic. This epidemic killed and downsized the population in many regions then (Noor Inayah et al., 2011). Ultimately, the researcher chose to focus on this subject - the Plague occurrence in the Middle East in the Middle Ages, with the primary emphasis on what took place in Egypt and Syria during the rule of the Mamluk Kingdom (656-922H/1258-1517M) and the impact of the Plague on socioeconomic life back then.

Infections and The Plague in the Middle East Before 656H/1258

The Plague that hit the Middle East can be classified as a biological natural disaster. It was natural disasters such as cholera, the Black Death, locusts, epizootics (diseases that impact livestock), and plant diseases that Mamluk historians constantly reported as natural factors that influenced the socioeconomics at that time (Wan Kamal, 2016). Therefore, any debate or discussion about the position and socioeconomic status during the Middle Ages is considered inaccurate if it does not examine the natural causes that inhibited it, which resulted in a high number of deaths, loss of jobs and livelihoods, increased demand, boosted in the price of goods and wage rates, and productivity plummet (Alexander, 1993; Rolfe, 1917; Bell, 1975). Mamluk historians have recorded much data on natural disasters of a biological nature that caused difficulties for the government, aristocratic and bourgeois groups, civilians, farmers, manufacturers, entrepreneurs, traders, and workers that had an impact on socioeconomic activities at that time, as written by Ahmed b. 'Ali al-Dalaji al-Misri (d. 838H/1435D), al-Maqrizi (d. 845H/1442D), Ibn Hajar al-Asqalani (d. 852H/1449D), Ibn Taghrir Birdi (d. 874H/1469D), al-Sayrafi (d. 900H/1495D), 'Abd al-Basit (d. 920H/1514D), Ibn Iyas (d. 930H/1524D) and the author of Kitab Nuzhat al-Nazirin (Wan Kamal et al., 2013).

Plague in the Mamluk period is also not a fresh subject matter. Its happening has been recorded before Islam, such as the Plague of Justinian or Justinianic Plague (541-549 AD), which took place during the Byzantine Empire, and it is estimated that 25,000,000-100,000,000 people died (Stathakopoulos, 2018). From Constantinople, this epidemic also navigated its way to Egypt (541 AD), the coastal areas of the Mediterranean Sea (544 AD), northern Europe, and the Arabian Peninsula (549 AD) (Stathakopoulos, 2018).

In the early days of Islam, this epidemic was reported several times, as recorded in the Kitab Tarikh Madinat Dimashq written by Ibn Asakir (1995). This data indicates how Saidina Umar bin al-Khattab RA cancelled his visit to Syria in 18H /639 AD when the region was hit by the Plague of ‘Amwas between Jerusalem and Ramallah. On their way to Syria, Saidina Umar and his friends returned to Medina after Abu Ubaydah bin al-Jarrah informed him that the Plague was spreading. Although Abu Ubaydah disapproved of the action because, to him, Saidina Umar denied Allah’s destiny, Saidina Umar and his other companions still decided to prevent the spread of the epidemic. That action demonstrates that Saidina Umar understood the hadith of the Prophet Muhammad PBUH regarding the prohibition of entering an area where there is an outbreak of epidemics, therefore saving oneself from the disease and not infecting others (Conrad, 1981). This epidemic claimed almost 20,000 Muslim lives and killed several companions and remarkable figures of Islam, including Abu Ubaydah bin al-Jarrah, Mu’az bin Jabal, Yazid bin Abu Sufyan, al-Harith bin al-Hisham, Suhayl bin Amru and ‘Utbah bin Suhayl (al-Sallabi 2010).

In addition, an epidemic known as Jarif arose in Basrah in the year 69H/688AD) during the time of Abdullah bin Zubayr (al-Sallabi 2010). Jarif implies to sweep, and this epidemic has been named as such because it has swept and hurt many human lives, even though it only took place for a few days (al-Sallabi 2010). In the year (87H/705AD), another epidemic spread in Iraq and Syria known as the Fatayat Plague (al-Sallabi 2010). The word Fatayat means teenage girls because, in the early stages, this disease only affected women and adolescent girls before it later spread to men (al-Sallabi 2010). This epidemic is also known as the Al-Ashraf Plague or the Plague of the Nobles because many nobles died then (al-Sallabi 2010).

The last epidemic that hit the era of the Umayyad kingdom occurred in the year 131H/748AD and was known as the Muslim bin Qutaybah Plague. This epidemic is named so because it takes the name of Muslim bin Qutaybah, who was the first victim to pass, and this disease hit the city of Basrah for three months (al-Sallabi 2010). Besides, this epidemic that occurred in the month of Ramadan caused so many deaths that there were days when the death toll reached up to one thousand people daily (al-Sallabi 2010). In the year 571 Hijrah, an
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epidemic hit Morocco and Andalus and claimed the lives of many people, up to 190,000 people, including four siblings of Saidina Yusuf bin Yaakub (al-Sallabi 2010). Among the Plague occurrences during the Abbasid Kingdom was in the year 656H/1258AD after the Mongols entered and destroyed the city of Baghdad, where Friday prayers and congregational prayers were stopped for several months due to an outbreak of disease (al-Sallabi 2010). The city of Baghdad became vacant, and there were only mentally ill people on the road (al-Sallabi 2010). Dead bodies were lying around and were not well taken care of, and when it rained, the situation exacerbated. Ultimately, this disease outbreak then spread to the province of Sham (al-Sallabi 2010).

Infections and Plague in the Middle East (Egypt and Syria) in the Mamluk Period (656-922H/1258-1517AD)

The Black Death or *al-Mawt al-Aswad* which occurred in 749H/1348AD during the reign of Sultan Hasan b. al-Nasir Muhammad is one of the most harmful historical cases of Plague happenings in the Middle Ages in the Middle East (al-Sallabi 2010). According to scholars, the disease originated in the Steppes area, Central Asia, and then spread with the Mongol army movement in the 13th century in Burma and Yunnan (al-Sallabi 2010). This epidemic broke out in China for the first time in 1331 AD. From the East, it spread to the West in Crimea in 1346 AD and Constantinople in 1347 AD (al-Sallabi 2010). From there, the Plague moved into the Balkans, and through the Mediterranean and Adriatic Seas, it infected Italy, European countries, and the Middle East (Ayalon, 2014). It reached Sicily, Marseille, and Alexandria in 1347 AD. It continued to advance through Italy and France in 1348 AD, the same year the Plague reached Cairo, Tunisia, and Damascus (al-Sallabi 2010). It continued to spread from Damascus to Anatolia, Mosul, and Baghdad in 1349 AD (Ayalon, 2014). The transmission of this Plague is illustrated in Figure 2.1 as follows:

![Figure 2.1. The Black Death (Plague) Transmission in Europe and the Near East (1346–1353)](source: Benedictow (2018))

In Egypt, this epidemic started in the autumn of 748H/1347AD (al-Sallabi 2010). By Muharram 749H/April 1348AD, it spread to the entire territory of Egypt and reached its peak in the months of Sha’ban, Ramadan, and Shawwal 749H/October 1348-January 1349AD (al-Sallabi 2010). It ended in Dhu al-Qidah 749H/February 1349AD (al-Hajji 1984; Dols 1977; Dols 1979; Ashtor 1976). Ibn Habib (1846), the Egyptian historian at that time, estimated that this Plague reduced 1/3 of the entire population of Egypt, which was between three and four million individuals (Poliak, 1938; Russell, 1966). After the Black Death pandemic, there were several more waves of Plague until the fall of the Mamluk kingdom in 922H/1517AD (Ibn Iyas, 1960; Ibn Taghri Birdi 1932; Ibn Khalil Ms. Hunt. 610). Historical evidence authenticates that plagues from the pneumatic Plague category have hit periodically during that period, mainly during the winter. At that time, there were three types of Plague: bubonic, septicemic, and pneumonia. Pneumonic Plague will cause a person to vomit blood due to an agonising infection in the lungs carried by ticks found on the body of rats. The
pneumonic Plague are ominous as it guarantees 100% fatality, and death can transpire within 24 to 36 hours if untreated (Morris, 1971; Borsch, 2005). The essentials and medical methods at that time were still traditional. Therefore, the existing facilities could not help to save many lives (Wan Kamal, 2006).

In modern medicine, a Plague is a natural epidemic infection involving rodents everywhere. This acute epidemic disease involving rats and wild rodents occurs in central, eastern, and southern Africa, South America, western North America, and most of Asia. In some areas, contact between forest mice and house mice is common and can lead to cases of human infection and sometimes epidemics. The causative agent is *Yersinia Pestis* bacteria (Norhayati, 2014). This bacteria can be seen in photo 2.1:

![Photo 2.1. The bacterium Yersinia Pestis that causes The Plague](image1)

Source: Stauffer (2002)

The spread of this epidemic is caused by the infection of ticks that are contagious from rats to other animals and humans (Stauffer, 2002). Human-to-human transmission does not occur except during pneumonic epidemics when respiratory fluid droplets from patients infect others nearby (Stauffer, 2002). The Plague can also spread through contact with contaminated objects such as tissues, towels or the fluids or pus of infected animals (Stauffer, 2002). The incubation period lasts one to seven days (Norhayati, 2014). Travelling to areas where the Plague is common (endemic) in rural areas holds risks, precisely when camping, hunting, or encountering rats (Norhayati, 2014). Photo 2.2 shows the flea involved:

![Photo 2.2. A species of rat flea (rat flea or *Xenopsylla Cheopis*) that causes the transmission of Yersinia Pestis and spreading bubonic Plague in most plagues.](image2)

Source: Centers for Disease Control and Prevention (2011)
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Photo 2.3. A hand that shows how acrylic finger gangrene occurs due to the bubonic Plague, which causes the skin and flesh to decompose and turn black.

Source: Centers for Disease Control and Prevention (2003)

Photo 2.4. Inguinal bubo happens when the upper thigh of a person infected with the bubonic Plague shows swollen glands, which often occur in the victim's neck, armpit, and groin (inguinal).

Source: Center for Disease Control (2006)

Among the signs and symptoms of this epidemic are fever, cough, distressing swelling at the base of the thighs, neck, and armpits, and vomiting (Norhayati, 2014). Plague infections split into three types:

The bubonic Plague, caused by the bite of an infected tick, causes inflammation of the lymph nodes (Lymphadenitis) and surrounding lymph nodes. Its prominent characteristic is a painful, purulent swelling.

Septicemic Plague spreads from bubonic Plague or occurs without lymphadenitis. The infection enters the bloodstream, causing inflammation in meningitis, endotoxic shock, and severe bleeding due to disseminated intravascular coagulation (DIVC).

Pneumonic Plague is an infection that can spread to the lungs and cause severe pneumonia. Patients can spread the disease through droplets of respiratory fluids. Individuals exposed to the droplets/liquid can get lung infections (Norhayati, 2014).

One must remember that the implications of a Plague without prompt and efficacious treatment result in 50 to 60% of cases being fatal (Norhayati, 2014). Untreated septicemic effects can cause endotoxic shock and disseminated intravascular coagulation (DIVC), while severe pneumonia occurs during pneumonic outbreaks (Norhayati, 2014). A special treatment called Streptomycin is recommended for this outbreak. Other drugs include gentamicin, tetracycline, and chloramphenicol (Norhayati, 2014). Among the preventive measures that can be taken are avoiding the infected area, not handling live or dead rats, staying away from crowded places,
Avoiding flea bites by using repellants and insecticides, avoiding handling dead rats, and declaring it to the health authorities if one finds many dead rats (Norhayati, 2014). This, too, includes avoiding contact with infected people, not touching the patient's body fluids, getting early treatment if infected, and storing and disposing of leftover food or garbage appropriately so that rats do not invade food and housing (Norhayati, 2014). This likely is one of the things that was not taken care of and taken seriously by the people of the Middle Ages because there was no knowledge or health education at that time, which caused the Plague to claim so many human lives easily.

About 50 years before the fall of the Mamluk kingdom (872-922H/1468-1517AD), several more plague attacks were also observed. The impact of infection and Plague on socioeconomic aspects in the Mamluk Period (656-922H/1258-1517M) is as in the following Table 2.1:

<table>
<thead>
<tr>
<th>Date</th>
<th>Plague Occurrences and Transmission Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>873H/1469M</td>
<td>The first Plague occurred during the reign of Sultan al-Ashtar Qaytbay. It lasted several months, from Rajab/January until Shawwal/May.</td>
</tr>
<tr>
<td>881H/1476-1477M</td>
<td>The second Plague happened during the reign of Sultan al-Ashtar Qaytbay. It lasted several months, from Ramadan (December) until Dhu al-hijjah (April).</td>
</tr>
<tr>
<td>897H/1492M</td>
<td>The third Plague transpired during the reign of Sultan al-Ashtar Qaytbay. The transmission started in Rabia al-Akhir in January and worsened in Jamada al-Akhir/March.</td>
</tr>
<tr>
<td>903H/1498M</td>
<td>Plague infection hit the Qayta district in the month of Jamada al-Akhir in January. It spread to the city of Cairo in the month of Rajab in February.</td>
</tr>
<tr>
<td>909H/1504M</td>
<td>The transmission of plague this year peaked at the end of Dhu al-hijjah in June.</td>
</tr>
<tr>
<td>910H/1505M</td>
<td>It continued the previous year's epidemic, worsening the situation during Ramadan/Febuary and Shawwal/March.</td>
</tr>
<tr>
<td>912H/1507M</td>
<td>A plague outbreak spread in southern Egypt at the end of the year.</td>
</tr>
<tr>
<td>919H/1513M</td>
<td>The blight epidemic started early this year and reached its climax in Safar/April and Rabia al-Awwal/May.</td>
</tr>
</tbody>
</table>

Source: (Ibn Iyas 1960; Ibn Taghri Birdi 1932; Ibn Khalil, Ms. Hunt 610)

Just as the COVID-19 outbreak has a considerable consequence on current socioeconomic aspects such as high death tolls, job losses, business premises being closed, economic activity being affected, dwindled incomes and social changes occurring, so are the implications in the Middle Ages, whether in the Middle East or Europe (Bean 1962-1963; Saltmarsh, 1941; Postan, 1950). In addition, the atmosphere at that time was less sophisticated and modern than it is now. Generally, scholars admit that the Plague impacted the population growth then. Abraham U dovitch maintained that the demographic changes caused by the Plague affected Egypt's agricultural sector and produced less productivity (Borsch, 2004). Boaz Shoshan (1982) cited that the current assessment of economic trends in Egypt between the years 751/1350 and 906/1500 confirmed a relationship between demographics and the slowdown in economic productivity.

Al-Sayrafi (1970), a historian of the Mamluk period, estimated that around 4,000 people died in the city of Cairo in one day during the peak of the cholera attack in 873H/1468AD. Children, Mamluk soldiers, enslaved people, and foreigners were among those who perished (Ibn Iyas, 1960). In the second attack of the cholera epidemic in 881H/1476-1477AD, it was reported that about 2,000 Royal Mamluk soldiers were killed. This is because most of them were still young and did not have sufficient immunity (Petry, 1994). Next, in the third outbreak of the Plague in 897H/1491AD, approximately 200,000 Egyptians died due to the epidemic, including residents in cities and villages (Petry, 1994). In 903H/1498AD, about 200,000 were killed, of which 1,200 were Royal Mamluk soldiers (Petry, 1994). At the same time, the cholera attack that occurred in 909H/1504AD claimed the lives of more than 100 people (Ibn Iyas, 1960). In 910H/1504AD, 4,000 people died in one day at the epidemic's peak (Ibn Iyas, 1960). Then, in 919H/1513AD, Diwan al-Mawarith al-Hashriyyah (Register of Unclaimed Property/the Bureau of Escheats) recorded that 356 people died in one day during the peak of the cholera occurrence (Ibn Iyas, 1960).

The effects of the cholera epidemic in rural areas were more consequential when many farmers died, and those who survived migrated to other places (al-Maqrizi 1942-1973). Several villages were abandoned in a cholera attack in 881H/1476-1477AD (al-Maqrizi 1942-1973). Al-Sakhawi (1995) wrote that in 897H/1492AD, Plague infection killed many farmers in the Siryaqus district and reduced the number of farmers working in the village.
crop fields in Bilbays. Next, in 919H/1513AD, the same Plague hit Asyut and caused many farmers to die (al-Wazan 1339H). William H. McNeill (1976) recorded that people in the countryside are more susceptible to Plague due to their lack of immunity. The blight epidemic has resulted in a need for more human resources for planting and harvesting activities. For example, crops could not be harvested in the Sharqiyyah area due to many farmer's deaths (al-Maqrizi 1942-1973). The same situation happened in Bilbays, Bahtit, Amiriyyah, and Matariyyah, and eventually, the crops became damaged (al-Maqrizi 1942-1973). At the same time, more workforce was needed to repair the irrigation system and other agricultural activities that affected the agricultural output, but the need was not fulfilled (al-Maqrizi 1942-1973).

Episodic Plague transmission that repeatedly occurred during the reign of the Mamluk Kingdom also implicated the industrial sector. Depopulation has resulted in a shortage of regular and skilled workers in various industrial sectors in Egypt. Therefore, the price of industrial goods was boosted. Mamluk historians have reported on the decline in the number of workers in the industrial sector, which resulted in some factories ceasing their operations and the influx of European industrial goods into the Egyptian trading markets. When the Plague hit in 842H/1438AD and several times after that, especially during Sultan al-Mu'ayyad Shaykh, some textile factories were converted to houses, warehouses, or other uses. The same applies to sugar, paper, and other factories (Wan Kamal, 2012).

Frequent Plagues also affected trade activities at both the local and international levels. The high number of deaths caused a decrease in the workforce and food supply and increased the price of goods (al-Sayrafi 1970). Hence, the public could not buy and sell as usual, and traders obtained only a small profit. The blight wave also affected human resources to work in the plantation and industrial sectors (Kashim & Husni 2017). This caused agricultural and industrial yields to decrease and could not be exported abroad in large quantities (Dols, 1979). Among the series of cholera outbreaks reported to affect the trade sector are those that occurred in 750H/1349M, 833H/1429M, 841H/1437M, and 898H/1492M (Dols, 1979). When an epidemic occurs, bazaars and business markets are the most sensitive places because they are susceptible to epidemics occurring there (Wan Kamal, 2009). Foreign traders also became the victims of this epidemic in 903H/1497-1498M, 919H/1513-1514M, and 919H/1513M (Dols, 1979). Merchants from Venice, Catalonia, and Ragusa were reported dead in the cholera outbreak. Thus, it harmed business dealings or trade transactions then (Dols, 1979; Wan Kamal, 2009).

CONCLUSION

Ergo, the public must be aware that the current COVID-19 disease attack that has claimed hundreds of thousands of people is not an unknown subject matter because history has recorded that similar epidemics have already occurred in Islamic history since the beginning of Islam, especially in the Middle Ages. The Plague, known as The Black Death or al-Mawt al-Aswad, originated in the East (Central Asia) and infected most regions in the world at that time, resulting in a high mortality rate. The Endemic was in its early stages and later turned into an epidemic and then a pandemic; this epidemic killed and pared the population in many regions.

The Plague that hit the Middle East can be classified as a biological natural disaster that impacted the socioeconomics at that time. It caused difficulties for the government, aristocracy and bourgeois, ordinary people, farmers, manufacturers, entrepreneurs, traders, and workers. It also drove many deaths among the population, loss of jobs and livelihoods, high demand, raised prices of goods and wage rates, and declined productivity. Historical evidence reveals that Plagues from the pneumonic Plague category emerged periodically during that period, primarily during the winter. Hence, this analysis verified that the scarcity of knowledge, health awareness and progressive Plague medical treatment in the Middle Ages cost many human lives.

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Centers for Disease Control and Prevention's Public Health Image Library (PHIL). 2011. The Oriental rat flea (Xenopsylla cheopis) engorged with blood. This species is the primary vector for the transmission of Yersinia pestis, the organism responsible for spreading bubonic Plague in most plague epidemics. Both male and female fleas feed on blood and can transmit the infection. https://commons.wikimedia.org/w/index.php?curid=17460340

Centers for Disease Control and Prevention's Public Health Image Library (PHIL). 2003. A hand showing how acral gangrene of the fingers due to bubonic Plague causes the skin and flesh to die and turn black. https://commons.wikimedia.org/w/index.php?curid=1849468


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