

A Study on Food Supply during the Great Plague of London in 1665

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Abstract: In 1665, the Great Plague swept through London, killing nearly 100,000 people. The London municipal government issued a decree to control the development of the epidemic. Its primary task was to ensure adequate food supply for residents, in order to stabilize social order. If a large number of deaths were caused by food shortage, it was likely to lead to riots and insurrections. Therefore, the government had established a relatively mature food supply system by regulating the market to stabilize prices, ensuring various food supply channels and arranging food delivery persons to deliver food. Merchants and people also took various measures to help each other to ensure food supplies, so that fewer people died of famine in the Great Plague of London in 1665. The epidemic prevention measures taken by the London government and residents at both the food supply and consumption end have effectively solved the food shortage caused by the outbreak of the epidemic and quickly stabilized the public sentiment, which provides a reference for countries under the epidemic to further improve their national governance mechanism and response mechanism to large public health emergencies.

Keywords: The Great Plague of London; Food Supply; Reaction Mechanism

1. Introduction

In the early modern times, England suffered from frequent plagues, which had a serious impact on its social development, especially the Great Plague of London in 1665. There are many researches on the rise, disappearance, impact and the number of deaths of the plague. Besides, there are also many studies on isolation policy, epidemic reporting system and environmental governance system committed to studying and analyzing British government's response mechanism to large-scale public health emergencies at that time, so as to provide experience for improving China's public health system and governance mechanism. Special researches on London, such as analyses on problems of London from the perspective of urban history or the impact of printing industry on public health security. However, there are few researches on epidemic prevention in local provinces and food supply in London during an epidemic. As the basic needs of people's survival, whether food can be supplied normally and whether the government can regulate the market in time and stabilize prices are particularly important in the outbreak and initial onset of the plague. According to the Bills of Mortality and official documents at the time, the proportion of people starving to death during the great Plague was very small, and the price of bread was relatively stable. There was no large-scale famine or "food grabbing" phenomenon.

Because there are three main food supply channels in London, the government, businessmen and citizens themselves. They complement each other, forming a relatively perfect food supply system. It provides experience and lessons for the improvement of national governance mechanism and response mechanism to large-scale public health emergencies in early modern Britain.

2. The Government's Food Supply

After the outbreak of the plague, many butchers, chefs and bakers fled the city, then shops, taverns and hotels were closed. Street markets were also restricted, causing inadequate food supplies and resulting in the deaths of residents. At the same time, some businessmen begun to hoard food, driving up prices. Because of that, people could not buy enough food in the early stage of the epidemic. For example, bakeries offered fewer products, and some unscrupulous vendors were short-weighting their products. As temperatures plunged in January and February and the supply of flour in bakeries dwindled, Alderman Turner and his colleagues decreased the weight of bread from its normal 11 ½ ounces to 10 ½ ounces and in March to 9 ½ ounces. In order to solve the problem of food supply, London government had taken a series of measures to ensure the basic living needs of residents.

First of all, price control. Prices in London have been restricted since the 16th century. For example, during the Tudor Dynasty, the royal decree was used to set official maximum prices for meat, sugar and wine to prevent merchants from gouging prices. After a few years, it has developed into a system of food supply which sheriffs, justices and mayors were responsible for supervising domestic food industry, ensuring adequate food supply and controlling prices. At the end of June 1665, the Official document ORDERS Conceived and Published by the Lord MAYOR and Aldermen of the City of London, concerning the Infection of the Plague (1665), the ORDERS concerning infected Houses, and Persons sick of the Plague(1665), and the order of the lord mayor in 1665 were issued, setting out provisions for food supply and stable prices. At the same time, it was customary for the town hall to regulate the weight of a penny of wheat bread or three half-pence of white bread once a week to keep prices stable^[7]. In addition, bakers were required to ensure that their ovens were running properly to ensure an adequate supply of bread.

Secondly, unblocked food supply channels in the country and safe food transaction process. That ensured the supply of daily necessities for the quarantined people in cities. In the mid-16th and 17th centuries, grain needed by London residents was mainly supplied by several counties in the south and southeast of England, such as Kent, Suffolk, Norfolk, Essex and Lincolnshire, which were all important supply areas of grain for London^[7]. The outbreak of the great Plague isolated many counties from London. The government closed a large number of pubs and markets, and merchants fled London. Other countries did not allow British merchant ships to enter the port and dock. A large number of traditional trade channels were closed, and domestic and foreign commercial activities almost completely stopped, resulting in a certain degree of food supply difficulties. There were only two types of trade channels relying on waterways left, which were the corn trade along the coast and the coal trade in Newcastle. For example, the market at Suffolk, known as the Bear-Key, maintained trade in food such as corn, butter and cheese during the Great Plague^[9]. The mayor supervised the process of trade in the area. Through reasonable measures and effective guidance, he kept the corn trade normal and ensured the safety of merchants in the north, so that they could continue to supply food to the residents of London during the plague.

Thirdly, the establishment of temporary, specialized emergency job- watchmen, who delivered food to normal citizens. In 1603, England legalized quarantine policy by passing the management act on people infected by the plague. In 1665, when the epidemic first emerged, the government imposed quarantine measures such as living in marked houses. Suspected or infected residents were not allowed to leave the house without approval. They needed to stay there for 40 days. In order to ensure the food supply for these isolated families, the government had arranged watchmen, who provided medicine and food through the window to the quarantined families to meet their basic needs. The cost of hiring a watchman was met by taxes, and food and medicine were paid by quarantined people or parishes. This creative measure solved the problem of food supply for most quarantined families and played an important role in stabilizing social order and reducing the spread of the virus. In addition, the Government arranged several prosecutors in each parish to visit patients to see if they had adequate supplies of medicine and food.

Fourthly, taxes. Relevant taxes were set up to ensure food supply, and a relatively mature relief system was established. Queen Elizabeth established the scot and lot in 1572 as a poorhouse fund for the relief of the sick and homeless. In 1601, Act for the Relief of the Poor 1601, 43 Eliz 1 c 2 marking the legal form to confirm the government's responsibility in poverty and unemployment. It also formulated a series of measures such as parish relief, poor tax collection to deal with emergencies. Therefore, during the great plague of 1665, the government, based on previous experience, levied a certain relief tax and cancelled most of the banquets to save money and help the affected families. The money collected is used not only to pay for the employment of watchmen, but also to provide food and medicine to the poor who had no doctors, pharmacists or nurses to care for them.

3. Merchants and London's Food Supply

London was one of the largest cities in Europe at that time, and its food supply was mainly maintained through domestic and foreign commercial trade activities. British business development is closely related to the food supply. As the gear of business operation, merchants play a decisive role in it. During this period, the merchants were involved in London's food trade in various ways. Not only the big merchants participated in import and export trade at home and abroad, but also the food middlemen and vendors were in direct contact with food producers and ran around the country and ports. These merchant groups played an important role in ensuring London's food supply, allowing residents to buy food from a variety

of sources during the plague. During the Plague, many countries banned British merchant ships from entering and landing, and the Government also shut down most of its trade in London. As a result, merchants abandoned much of their overseas trade and focused on domestic food market. At the same time, with most of the old shipping lanes closed, merchants began looking for new ways to transport food into the city.

First of all, large grain merchants, fruit merchants and livestock traders who had long been engaged in domestic trading usually bought their food in local markets or from producers and shipped it to London for sale^[17]. During the Great Plague, in order to avoid the plague, most of the large merchants bought grain through middlemen, thus speeding up the circulation of food in London. The old routes were largely closed, and most merchants chose to hire horse-drawn carriages to bring goods to London from surrounding towns such as Cambridge. Many merchants took boats across the Thames each week to bring products and livestock from the north to London's markets and abattoirs, which was an important food lifeline for Londoners^[17].

Secondly, smaller traders clustered within the walls of London and formed small markets selling food, allowing residents to find fresh vegetables within a short walk. Between 6am and 8am traders sold fresh food in the market for Londoners to choose from, and then begun to sell perishable food^[17]. Because of their flexibility and convenience, such small markets were often supported by large merchants, such as Covent Garden's grocer, who offered free market stalls after the outbreak of the plague.

Thirdly, the activities of vendors are an important supplement to London's food supply. With the development of business, governmental restrictions on small vendors had been eased, and this group played an increasingly prominent role in the food supply. During the Great Plague, the number of food providers in London accounted for 16% of the city's population, enough to feed the city's survivors^[17]. Rural and market areas where small traders were active were the main food sources for London citizens. At the same time, vendors often went to professional markets, which were popular in the 17th century in British, to purchase a large number of grain. Then they took advantage of their flexibility and wandered on the streets in the city, which was known as 'the city's criers'. They communicated the towns and villages, providing food for Londoners and further expanding food trade channels in London.

Finally, many businessmen voluntarily donated money to buy food and helped the poor. In the 17th century, English merchants kept the late medieval tradition of "God's penny"^[20]. Besides, English guilds still played an important role. All guilds, following the orders of the town hall, reserved their grain and coal quotas for the urban poor to make up for the government's inadequate food supply. Turner, for example, a prominent businessman of the time, whose guild was nicknamed 'the worshipful companies', regularly provided free bread, beer and coal to the poor^[17]. At special times, its members often donated money, individually or collectively, to help the poor in extreme needs to keep them from starving. The Government of London also relied on the guilds at times when food supplies were most scarce. It can be seen that merchants in this period played an important role in changing the way of food trade in London, broadening the channels of food trade activities in London and making up for the shortage of traditional food supply. By maintaining normal trade activities, the merchant group implemented the government's policy of guaranteeing people's livelihood and food supply, which was of great significance to London's food supply during the plague.

4. People's Self-rescue and Mutual Assistance and Food Supply

For a variety of reasons, some residents were unable to leave London, even during the worst of the pandemic. To make ends meet, they saved food and traded to survive the famine caused by the plague. If possible, some well-meaning rich people would help the poor to meet their needs for food and warmth through donations.

Wealthier Londoners would cope with short-term food shortages caused by the plague by drawing on their family stores. Due to the fear of plague, volcano, earthquake and other disasters, most London residents have a certain amount of reserve food at home, which are generally non-perishable food, such as cereals, cured meat food, so as to meet their basic needs. During the Great Plague, for example, Daniel Defoe's family fed themselves with bread, butter and other supplies stored at home^[9].

In addition, people of certain economic and social status would usually send their servants to buy the necessary food, while ordinary Londoners would have to do the shopping themselves. Food buyers usually went out for shopping on a regular basis once a week. They went to the nearby countryside by land or by boat through the River Thames^[9]. The food they bought was mostly fresh fruits, vegetables,

eggs, milk and fish produced in the nearby countryside, with basically no meat or wine. This kind of procurement mode belongs to basic sufficiency of food, which makes up for the deficiency of government and merchants' food supply mode, while the latter cover a wide range but has low precision. It ensures the needs of those who have certain economic strength but do not have enough food reserves. It also enriches the residents' demands for diversified food. For this reason, the government did not impose too many restrictions on private procurement.

For poor people, they tended to get food through government and parish relief, because only rich people could achieve food by personal storage or shopping. According to the Elizabethan Poor Law of 1601, during the Great Plague, the government set up relief stations in the city center, and distributed relief taxes collected from the surrounding areas to the poor who came to receive weekly alms to ensure the daily living expenses of some poor people. At that time, the religious institutions played a positive role in relief, which was different from the past. In the 16th and 17th centuries, the secular government gradually replaced the religious institutions and assumed the main responsibility of plague control. The church, as an auxiliary force, tended to compromise and integrate with the secular government, thus enabling the smooth implementation of government laws and providing a strong guarantee for the food supply and distribution for the people. During the Great Plague of 1665, parishes became London's main source of aid. Every week more than 100,000 pounds of grants were distributed to different parishes and towns by church commissioners or mayors and councilors^[15]. In the late 17th century, the British poor law mainly provided out-of-court relief, providing two kinds of relief, one of which was "indefinite relief". It was provided to those who lost their livelihood in the case of illness or unemployment. The standard varied from place to place. In London, it was 1.4 shillings to 2 shillings per week, which was distributed by the parish. The poorest lived on bread and cheese. With three pence, they could buy wheat bread for a penny, and cheap cheese for a pound, so that they could survive for a week with two shillings. For a few more pennies they could strengthen themselves with sausage or chicken and beer. On December 30, 1665, for example, the parish sent five shillings to Goodman Phillips and his children to support the poor family for a week. Known as 'collectors of the poor', it was a vital lifeline for the poor, paying for the care, feeding or burial of as many as 1,700 people in a week at the peak of the plague^[7].

In addition to the relief provided by the government and the parish, many rich people offered necessary food, medicine and other help to the poor every day out of compassion and social responsibility. They donated a large amount of money to the mayor and councilors in the name of charity to improve the living conditions of the poor, especially poor families. Many women participated in this work, distributing supplies to the poor and even visiting the sick to assign them pharmacists and surgeons^[9]. Many received assistance and sustains from donation. At the same time, some refuges helped the poor and homeless, such as St Bartholomew's Hospice, a charity founded in the 12th century as St Bartholomew's Hospital. It gave the homeless food, medicine, wine and shelter during the plague. When the supplies are in short supply, it is undoubtedly a good way to get food resources easily and quickly for those who cannot get food.

5.Conclusion

From the 15th century to the 16th century, there were 11 large infectious diseases agreed by most scholars in Britain, such as plague in 1499, malaria in 1517, syphilis in the 16th century, and the Great Plague of London in 1665. Large-scale infectious disease is a "big test" for the state system, especially for the public health system. After several epidemics, the British government and its people gradually realize the importance of public health and epidemic prevention system. The improvement of the upper system construction provides sufficient guarantee to fight infectious diseases. In this unprecedented disaster, the British government realized that the most important thing is to formulate health laws and regulations, establish a sound and perfect health and epidemic prevention system, and promote the process of scientific and modernized health system. At the same time, the British government also realizes that the need for food is the basic demand of the people, and food supply is the basic measure to ensure people's livelihood during the epidemic. Food is the most basic need of human beings. If the normal supply of food cannot be guaranteed, residents will fall into a great panic, thus triggering a greater social crisis.

During the great Plague of 1665, three different groups, including government, wealthy businessmen and ordinary people, made contributions to solve the problem of insufficient food supply at the initial stage of the epidemic through their own means. The British government set up a complete system to ensure food supply and keep prices down. It also raised funds to secure food supply through taxes and donations from the wealthy. Merchants in London provided food for residents by creating new routes for

food transportation and maintaining normal trade. Residents responded to the shortage by using their household food stocks or going out to buy food. In this period, the rich showed their strong sense of social responsibility and donated food and money to the government and parishes to help the poor and homeless to tide over difficulties. As a result of concerted efforts on all sides, few people died of starvation in London during the Great Plague.

The government's actions during the plague were very effective, thus the economic development and political situation in London were stabilized, helping London steadily develop into an international metropolis with strong resistance to pressure, diversified response methods and modern thinking. Under the impact of the pandemic, the government was able to respond according to the actual situation and conditions, and to introduce measures conducive to alleviating the food crisis, transmission crisis and riot crisis brought by the pandemic. The promulgation of relevant laws and the extensive connection and use of the advantages of various social strata reflect that the British political system has entered a relatively mature stage. At the same time, the demand for food supply during the great plague also puts forward new requirements for economic and social development. It should provide high quality and a variety of foods in normal years while conform to the actual situation of food supply in special years. After the great plague, Britain's social and economic development had tended to diversification, and its ability to cope with the crisis would be further improved.

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