ORIGINAL ARTICLE

Assessing the Impact of Farmanfarma's Poorhouses in Shiraz on the Control of Cholera (1917-1918)

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Abstract
Cholera, which has been referred to as an illness, a specific disease, and an epidemic, spread in Shiraz in 1917 and 1918 due to several factors, including World War I, drought, locust infestations, and civil wars. The spread of this disease is closely related to non-compliance with health principles. Issues, such as food shortages, a lack of sanitary and medical supplies, and contaminated water, have led to a decline in hygiene, physical weakness, and an increase in infections. That year, one hundred people died every day due to contracting the disease. In October of the same year, Abdolhossein Mirza Farmanfarma, the ruler of Fars, began constructing seven poorhouses in Shiraz. Coinciding with his efforts, the cholera epidemic was ongoing. The poorhouses were tasked with providing food, clothing, coal, sheets, and shelter for the poor and orphans, and their construction helped reduce the spread of cholera. The establishment of a free cholera hospital along with the poorhouses, and efforts, such as transporting and burying the bodies of the dead, providing safe water and food, supplying coal and heating during winter, promoting immunity, gathering the needy, assisting in infection prevention, adhering to treatment principles, and providing medicine-all contributed to decreasing the rate of cholera infection.

Key words: Farmanfarma, Poorhouse, Cholera, Shiraz, Famine, World War I, Droughts

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Introduction

Throughout its history, Shiraz has faced many hardships, including the devastating cholera epidemics of the late Qajar period. The disease affected people across all social classes, threatening the city's stability. In response, Abdolhossein Mirza Farmanfarma (1857–1939), the governor of Fars Province and Shiraz, took decisive steps to control the outbreak and reduce deaths. His most significant action was establishing buildings called poorhouses, which cared for orphans and the poor. No research has yet explored the role of these poorhouses in controlling cholera in Shiraz. However, Mohammad Barkat (2013) introduced the second booklet of the two lithographic booklets of *Asas al-Khair Farmani*, related to Farmanfarma's efforts, including the building of poorhouses in 1917. Studies by Ali Naghi Shirazi and Homa Nategh (1977), Mostafa Karim Khan Zand (2012), Amborel (2013), Nasrin Foroughi and Ali Akbar Jafari (2015), and Suleiman Heydari (2017) have examined the spread of cholera in Shiraz and of the disease in general. Due to the lack of research in this area, the researcher aims to analyze the construction of poorhouses and their impact on cholera control for the first time, using a descriptive-analytical approach based on historical texts and documents. This includes, in particular, the two-volume lithographic booklet of *Asas al-Khair Farmani*, whose first volume was previously considered rare and is part of library studies. To achieve this goal, the research seeks to answer three main questions: First, what were Farmani's poorhouses and what functions did they serve? Second, what societal conditions during the famine led to the cholera outbreak in Shiraz in 1917 AD? And third, how might the construction of poorhouses have influenced the control and reduction of cholera's prevalence?

The Situation and Conditions of Shiraz during the Famine of 1913

The rule of Abdolhossein Mirza Farmanfarma, applied in 1915, coincided with numerous problems in the country, especially in Fars Province. Accepting the rule of Fars was a serious matter that brought many responsibilities and difficulties, which perhaps only he could handle. The drought began in 1913. The war between British forces and the Qashqai, along with the British defeat on June 7, 1918, led to a two-month siege of Shiraz and increased the problems like insecurity, water shortages, and famine. Conflicts with pro-Farmanfarma police, disorder within departments, thefts and robberies, the need to reform the police station, and thefts by groups of 100 to 200 people extending to Kerman and Yazd all contributed to the chaos caused by hungry and famine-stricken people. British forces hoarded and consumed food, compounding the crisis (Etehadieh, 2004, pp. 395-441). Raees al-Ateba believed that the British, through mercenaries, bought goods from wherever and in any quantity they could find. Sometimes they allowed goods to molder and then discarded them, which caused man-made famine and high prices (Raees al-Ateba, 2010, p. 150). Therefore, the British pre-purchases were banned by implementing daily reports to the inspectors' committee (Etehadieh, Pira, and Rouhi, 2014, p. 587).

The First World War (1914-1918 AD) caused problems and damage for all Iranians, but the people of Fars Province were particularly affected. Famine and high prices caused by the war, eight years of locust infestation, two years of drought, and unseasonable rains that ruined crops. Internal conflicts between the two tribes, Qashqai and Khamseh, further destabilized the region (Shirazi, 1917, pp. 12-34). Most devastatingly, Cholera erupted amid these crises. The famine was so severe that people were forced to eat the

blood in the butcher shop and barley grains extracted from horse dung. Bread had become scarce, and sometimes they had to eat locusts (Estakhr, 2021, pp. 137-140). Locust infestation and drought, in addition to the scarcity of all kinds of goods that had arisen due to the world war, caused a critical shortage of food, medicine, and sanitary supplies. This undermined public health, leaving the population malnourished, physically weakened, and vulnerable to various diseases, including the epidemic of Cholera. Even people who made a living by selling agricultural products suffered from poverty in the years of drought, which affected the supply of medicine and food. As conditions worsened, impoverished rural migrants flooded into Shiraz, swelling the city's destitute population to an estimated 30,000 men, women, and children (Raees al-Ateba, 2010, p. 149).

Mirza Ahmad Khan Pajouh Shirazi, the head of the Bandar Abbas post office, depicted the social conditions in Shiraz during the severe famine, noting that the number of the needy was countless and their population was creating a visible crisis. The air was filled with the cries of widows and the desperate screams of orphans starving for food (Roknzadeh Adamiat, 1978, Vol. 1, p. 296). Nayer Shirazi also described the famine as follows: Empty stomachs, withered faces, sunken eyes, and naked bodies in the winter were very painful. Children and mothers wailed in hunger, while weakened men collapsed in corners, too frail to stand (Nayer Shirazi, 2004, p. 221).

During those years, a widespread rumor accused the British presence in Shiraz of exacerbating the famine and inflation. Many believed that the British and their affiliated forces had worsened shortages by purchasing goods in excess and at any price, thereby driving up costs and depleting supplies. Nayer Shirazi was among those who attributed the famine's severity largely to British activities, as their indiscriminate buying sprees created artificial scarcity and rising prices (Roknzadeh Adamiat, 1978, Vol. 1, pp. 196-240).

Compounding the crisis, locust infestations devastated food supplies. In response, the Locust Purchase Committee—chaired by Rais al-Ulama—initiated a large-scale effort to contain the infestation. The committee purchased locusts at four rials per *man* (approximately seven kilograms), collecting and destroying 10,000 to 15,000 locusts daily until the locust eggs were eradicated. Subsequently, Rais al-Ulama oversaw the construction of a poorhouse and bakery, facilitated the distribution of meat and coal, and coordinated relief efforts until the famine subsided. Throughout this period, countless individuals worked tirelessly to mitigate the disaster (Roknzadeh Adamiat, 1978, Vol. 1, pp. 196-240).

The History of Establishing a Charity Company and a Poorhouse

A poorhouse served as an institution for housing the destitute, impoverished, and orphaned. During the famine and severe living conditions in Shiraz, philanthropic efforts emerged to establish shelters for vulnerable populations. Historical records from 1916 detail one such initiative led by Waqar al-Dawla Mirza Abbas, son of Mirza Ali Sufi. He organized monthly charitable contributions from local donors to fund a poorhouse, appointing himself as its overseer.

The operation was headquartered in a rented office within Haj Seyed Ahmad Boranjani's residence, located behind the home of Raees al-Ateba. Waqar al-Dawla staffed the institution with a deputy and servants, providing Zandi with barley bread for the needy.

Authorities forcibly relocated poor individuals from the streets to these shelters. However, within two months, financial mismanagement and disorder led to the poorhouse's closure, dispersing its occupants into mosques, alleyways, and marketplaces.

Subsequently, Farmanfarma repurposed a caravanserai as a renewed shelter under Waqar al-Dawla's management. Despite these efforts, many of the impoverished residents perished over time due to the ongoing crisis (Raees al-Ateba, 2010, p. 150).

A poorhouse is a place where the needy, the poor, and orphans are kept. In the midst of the famine and the difficulty of living in Shiraz, some people took charitable actions to establish shelters for orphans and the poor. Historical records from 1916 detail one such initiative led by Waqar al-Dawla Mirza Abbas, son of Mirza Ali Sufi. He organized monthly charitable contributions from local donors to fund a poorhouse, appointing himself as the head of the house. He rented an office in the house of Haj Seyed Ahmad Boranjani, located behind the house of the Raees al-Ateba. Waqar al-Dawla staffed the institution with a deputy and servants, providing Zandi with barley bread for the needy. Authorities forcibly relocated needy individuals from the streets to these shelters. However, within two months, financial mismanagement and disorder led to the poorhouse's closure, dispersing its occupants into mosques, alleyways, and marketplaces. Then, Farmanfarma repaired a caravanserai as a renewed shelter under the management of Waqar al-Dawla. Despite these efforts, many of the impoverished residents perished over time due to the ongoing crisis (Raees al-Ateba, 2010, p. 150).

The Fars newspaper on December 3, 1917, stated that a charity company had been established with specific operational guidelines. Its capital was managed by the governing group, and the group is elected by the members of the company. Its charitable affairs included the care and treatment of the poor, the guardianship and education of indigent orphans, the establishment of schools and free hospitals, and the provision of emergency aid. Founded through the efforts of Mirza Homayoun Khan, the inspector of Financial Affairs, the organization nearly dissolved due to the founder's absence during travel and challenging social conditions. However, it resumed operations in Shiraz after some time, eventually housing, feeding, clothing, and educating one hundred orphaned children at the Ilkhani Hosseiniyeh.

The governing group included: the boss, the treasurer (Mirza Mohammad Baqer Khan), the superintendent (Etemad Divan), the accountant and clerk (Mirza Fatah Khan and Haj Mohazab al-Dawla), and advisors (Moayyed al-Sharia and Medhat al-Saltanah) (Banan al-Molk, 1917b, pp. 5-6).

On June 25, 1917, due to unfavorable conditions such as locust infestations, successive looting, plundering, and high prices, the General Treasury Department provided financial aid for the needy, including expenses for repairing the poorhouse and provisioning, totaling five thousand tomans from tax revenues (Manuscript No. 240003118, 1917, pp. 23-26). In 1916, only one poorhouse, named *Dar al-Ajaza Kabira* (the Great Poorhouse), was built on the site of the Ali ibn Hamza (AS) caravanserai, which belonged to the government. The expenses for the poorhouse were covered with help from the government, the British Consulate and other sources, such as the political offenses of Haji Mohammad Ibrahim Khan (Framanfarmaeian, 2003, Vol. 2, pp. 194-195), along with assistance from Sheikh Yousef and Haji Mohazab al-Dawla. It was operated under the direct supervision of Farmanfarma and managed by Waqar al-Dawla (Etehadieh, 2004, p. 443).

In January 1917, Farmanfarma also received funds from merchants and landlords to establish a poorhouse. This institution provided shelter for approximately six hundred urban and rural residents, while also supplying their basic necessities, including food, clothing, and heating fuel (coal) (Roknzadeh Adamiat, 1978, Vol. 2, p. 324). Approximately fifty people died daily in the alleys due to severe hunger and cold. In the poorhouse, in winter, food, such as soup and stew were prepared for 1,500 to 2,000 people and the necessities of life for 900 of them, including firewood, mats, quilts, coal and other means of comfort, were provided, which was under the supervision of Waqar al-Dawla (Manuscript No. 240003118, 1917, pp. 45-60). Children, women, and the needy of the alleys were gathered in a caravanserai and several houses. To ensure transparency and public trust, authorities appointed an independent supervisory committee composed exclusively of non-governmental personnel. On the second of Shawwal of the same year, a proposal was made to build Taubeh bread shops (thin bread that was cooked on a metal pan with minimal coal and fuel) (Etehadieh, 2004, pp. 442-445). These shops provided cheap or free Taubeh bread to the poor during the famine, keeping people at least safe from hunger and death. (Figure 1)

Figure 1. The Dar al-Ajaza Kabira, January 1917 AD, where people are standing on the roof of the Ali ibn Hamza (AS) bathhouse (Hamam) next to the caravanserai (Sane, 2012, pp. 62-63).

Farmani's Poorhouses

Abdolhossein Mirza Farmanfarma, the then ruler of Fars and Shiraz, offered three basic solutions to combat the difficult conditions caused by the famine: importing flour from Karachi in India via Bushehr until the harvest season, building fifty-three bakery shops (Taubeh bread), part of which was funded through financial aid from the city's elders and the ruler (Shirazi, 1917, pp. 26-29), and establishing several urban mills. Additionally, more than fifty shops for *Ash* and *Dampokht Pazi* were built to provide food for the needy (Banan al-Molk, 1917a, p. 6). These shops, along with the bakery shops, provided sustenance to the impoverished population either free of charge or at subsidized rates (Estakhr,

2021, p. 138). Furthermore, they constructed several poorhouses (Etehadieh, 2004, p. 441). Besides the government efforts, Farmanfarma also sought financial help and counsel from wealthy individuals (Etehadieh, 2004, pp. 442-468). Other measures included providing coal, keeping port roads open, facilitating caravan passage, and controlling high prices, which led to better conditions in Shiraz compared to other cities (Shirazi, 1917, p. 33).

On November 14, 1916, a poorhouse was established by order of Farmanfarma under the name of *Dar al-Ajaza Kabira*. However, the following year, the need for several poorhouses in different neighborhoods of the city became apparent. On Tuesday, November 6, 1917, at half past three in the afternoon, the Supreme Charity Council of Shiraz met in the courtyard next to the Karim Khani Citadel. About four hundred affluent people, including merchants, landlords, and members of other guilds, attended along with Farmanfarma to plan the construction of poorhouses, bakery shops, and other provisions needed due to the escalating drought and famine, which had worsened the condition of the poor (Shirazi, 1917, pp. 8-23).

All the people of the city were satisfied with Farmanfarma's efforts in establishing poorhouses and his other relief measures during the Shiraz famine. As inferred from the reports of the local police stations, people were concerned about the closure of these shelters. For instance, someone in the shoemakers' market said, "*All the people will die this year*," and another person in response said, "*Thank God that Farmanfarma set up these poorhouses in the city; otherwise, the people would have died*". Rumors even spread that the poorhouses were going to be gradually collected, and soldiers would be stationed in them. People and all the great men of the city were satisfied with the construction of the poorhouses, which had saved the lives of the poor, improved security, and reduced theft. They prayed for Farmanfarma. It was repeatedly heard from the people who said, "*May God bless Farmanfarma's parents, for without these shelters and the food they provided, countless would have died of hunger*" (Etehadieh, Pira, and Rouhi, 2014, pp. 150-608).

A fourteen-member advisory council, known as "*the Electees*," was established to oversee poorhouse operations. The carefully selected composition included: two great scholars, two wealthy benefactors, two merchants, two landlords, two shopkeepers, and four bazaar representatives. They were required to convene in the citadel two to three days a week under the supervision of Farmanfarma (Shirazi, 1917, p. 22). Their inaugural meeting occurred on November 10, 1917. The account of the shops, the handling of the poorhouses, and the two hospitals were the responsibility of this group. The appointed members included:

1- Ahmad Tajer Lari, 2- Seyed Ismail Tajer Dehdashti, 3- Haj Mirza Mohammad Ali Tajer Dehdashti, 4- Gholam Ali Behbahani, 5- Mohazab al-Dawla from the elders and landlords, 6- Moayyed al-Sharia from the landlords, 7- Haj Seyed Mohammad Sadegh Tarkashdooz from the guilds, 8- Abolghasem Nasir al-Molk from the rich, 9- Ali Zare, 10- Haj Ali Mohammad Toton Foroush from the guilds, 11- Jalal al-Din Rais al-Ulama, 12- Amin al-Ra'aya from the guilds, 13- Haj Mirza Abdullah Zare Malek, 14- Mohammad Baqer from the rich (Shirazi, 1918, p. 25).

From this council, members elected executive members consisting of a chairman, vice-chairman, and two secretaries. They maintained continuous operations between committee sessions, with specific responsibilities: Financial accounting and operational

inspections, organizing meeting minutes, documenting all proceedings, and preparing specialized report booklets for each session. The chairman was Sheikh Jalal al-Din Rais al-Ulama, the vice-chairman, Haj Mohazab al-Dawla, and concerning the secretary, Mirza Mohammad Baqer Khan, and Azam al-Saltanah were the first, and Haj Mirza Abdullah Zare and Zal Khan were the second secretary (Shirazi, 1918, p. 9; Raees al-Ateba, 2010, p. 161).

In the meeting of November 6, 1917, Farmanfarma, in consultation with the elected group, identified seven places for the poor, disabled, and orphan individuals at the seven gates of the city, each accommodating two hundredneedy people. Each poorhouse offers basic necessities, such as food, clothing, carpets, fuel, and lamps. The most comprehensive poorhouse was located at the Isfahan gate in the caravanserai opposite the tomb of Ali ibn Hamza (AS), which was fully equipped and resembled a guest house (Shirazi, 1917, pp. 23-30). British financial support helped Farmanfarma until tax revenues could be collected (Etehadieh, 2004, p. 353). Subsequently, with help from the city's elders and Farmanfarma himself, the poorhouses were established (Shirazi, 1918, p. 14). According to the reports published in Fars newspaper, the poorhouses in Shiraz were established in 1918, while in other famine-affected cities like Kashan, a poorhouse was also established in 1917 (Banan al-Molk, 1918, p. 9). The construction of these poorhouses significantly improved social security in and around the city. In winter, the seven poorhouses housed two to three thousand needy homeless people, including men, women, and children as young as four or five years (Shirazi, 1917, pp. 31-33).

The Estakhr newspaper reported that orphans and the poor from the villages were also taken to the poorhouses. The newspaper provided interesting information about the poorhouse number 3 located in the Ilkhani Hosseiniyeh, which accommodated 120 residents. The poorhouse provided them with clothes and food. In addition, the poorhouse engaged the residents in vocational and handicraft training, such as carpentry and carpet weaving. However, the influenza outbreak significantly reduced the resident population through either mortality or desertion. Etemad Divan was the manager of this poorhouse, and he had an elementary teacher of *Quran*, calligraphy, Persian, and anthem. He had fourteen male and twelve female students. The staff comprised a teacher, a disciplinarian, an observer, one male and two female servants (Estakhr, 1919, pp. 1-2). It was decided that after the crisis and famine, all these poorhouses would be transformed into schools and industrial and vocational workshops where orphaned children and unemployed adults could acquire professional skills. (Farmanfarmaeian, 2003, p. 227).

Sheikh Morteza Mojtahed Mahallati (1867-1929 AD) played a prominent role in matters related to the poorhouse and social crises. He was one of the speakers at the charity meeting, and supported Farmanfarma's efforts and even pledged financial contributions to support the impoverished. (Shirazi, 1917, p. 7). In his speeches, he initially criticized Farmanfarma as a collaborator of the British, but then spoke well of him and his humanitarian actions. He was strongly opposed to the British and blamed them for worsening the famine conditions. One day, a mourning ceremony was held in the house of Sheikh Morteza. Sheikh Mohammad, the mourner, claimed from the pulpit that the British were poisoning water supplies to systematically eliminate the population (Etehadieh, Pira and Rouhi, 2014, pp. 277-623). (Figure 2)

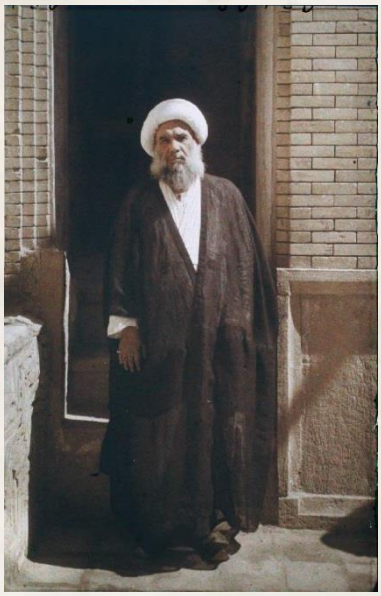

Figure 2. Image of Sheikh Morteza Mojtahed Mahallati from the Albert Kahn photo collection, 1927 AD.

To address the growing unrest caused by impoverished residents in the city's alleys (Shirazi, 1917, p. 25), authorities expanded the poorhouse system beyond the six existing facilities at the city gates. A seventh center, "*Dar al-Mustahiqin No. 7*", was established in the urban core under the joint supervision of Haj Seyed Mohammad Sadegh and local guild leaders. Farmanfarma ensured its funding—covering both monetary and in-kind expenses—mirrored the support provided to other poorhouses. This facility primarily served individuals gathered from the alleyways, who constituted the majority of its wards (Shirazi, 1918, p. 14).

According to Farmanfarma's order, it was decided that financial aid for bread should be considered for a hundred children and orphans of the poor of the *Kalimian* neighborhood under the guardianship of the *Israeli Alliance* school. Concurrently, vocational training programs were instituted, with skilled artisans teaching shoemaking and *Maleki* sewing (a traditional footwear craft) to destitute youth (Shirazi, 1917, p. 37).

Javanmardan-e Vatan group was a group of wealthy people whose assistance led to the construction of a poorhouse. The group's director was elected by its members (Shirazi, 1918, p. 9; Emdad, 2008, p. 661), with leadership later delegated to Farmanfarma's son, Mohammad Hossein Mirza (Raees al-Ateba, 2010, p. 162).

This group was divided into two categories: accountants and inspectors, and the inspectors' committee was responsible for inspecting the bakery shops and poorhouses and supervised the affairs of the accountants' committee, which was responsible for calculating the seven poorhouses and two hospitals. The inspectors included Dabir Lashkar, Saif al-Sadat, Zia al-Islam al-Husseini, Mohammad Yousef, Mohammad Hassan Nazem al-Sharia, Mohammad Ismail Kazerooni, Mohammad Mehdi Namazi, Mirza Mohammad Hassan Ismail Beyk, and the group of Muhtasibin included Mahmoudzadeh Sadr al-Sharia, Ali Asghar Sadr, Sadrzadeh, Mohammad Hassan Modarres, Hossein Ali, Etemad Lashkar, Mohammad Karim Zare, and Mohsen Ibn Modabber al-Saltanah. Financial

reports were audited in joint sessions of the Elected Council and *Javanmardan-e Vatan group's* thirty-member assembly. Both committees reviewed disbursements of cash and goods, with their approvals formally recorded (Shirazi, 1918, pp. 17–24) (Table 1).

Table 1: Details of Farmani's Poorhouses and Hospitals in 1917 (Shirazi, 1917, pp. 23-24)

No.	Poorhouse Name	Location	Location Detail	Management	Description
1	*Dar al-Ajaza Kabira*	Isfahan Gate	Ali ibn Hamza (AS) Caravanserai	Mirza Abbas Khan Waqar al-Dawla/ Mohammad Ali Khan, brother of Zal Khan	1500 people under guardianship and has a brief hospital with supplies, beds, and medicine
2	*Dar al-Mohtajin*	*Shah-Dai-Allah* Gate	The tomb of Shah-Dai-Allah, the burial place of Nizam al-Din Mahmoud, one of the buildings of Karim Khani	Sultan Ali Khan Montaser al-Molk / Masoud al-Saltanah, son of Saheb Divan	300 people under guardianship, whose clothing was provided by the sisters of Ibrahim Khan Qavam al-Molk and was first restored.
3	*Dar al-Aytam*		Ilkhani Hosseiniyeh	Mirza Homayoun Khan, Inspector of Financial Affairs / Etemad Divan, son of Haj Mohammad Ibrahim	150 orphaned children are under guardianship as a school, and have a technical school
4	*Dar al-Foqara*	Kazerun Gate	Emami Caravanserai behind the tomb of Shah Mohammad (AS)	Mirza Homayoun Khan / Mirza Ali Khan	It was initially repaired.
5	*Dar al-Zoafa*	Kazerun Gate (The Raees al-Ateba introduced it as *Kal Shazdeh Qasem**)	Haj Ali Asghar's leased caravanserai	Sheikh Mohammad Reza Abolahrar and the supervision of Moaddab al-Saltan, Deputy of Financial Affairs	300 poor people
6	*Dar al-Masakin*	*Qassab Khaneh* Gate	In Mali's leased caravanserai	Moayyed al-Saltan / Montaser Divan	304 poor people
7	*Dar al-Mostahiqin*	Mid-city (The Raees al-Ateba mentioned it in the *Mola* neighborhood)	Abdul Hossein caravanserai	Haj Seyed Mohammad Sadegh Seraj and a group of guilds	
8	*Hospital (Farmani's Behbudestan)*			Nizam al-Din Mirza	60 patients from poorhouses
9	*Hospital*		Outside the city	Nizam al-Din Mirza	cholera patients

*The oblique line indicates the next manager.

The Causes of Cholera and Sanitary Measures against It

Cholera is an acute diarrheal illness that can lead to severe and rapidly progressive dehydration within hours and ultimately death (Fauci, 2008, p. 493). Drinking water contaminated with feces is the most common way to acquire Vibrio Cholerae, and consuming contaminated food can also be associated with the spread of infection (Fauci, 2008, p. 493). In addition, swimming, washing clothes in contaminated waters, and using the clothes and sheets of a cholera patient, as well as human manure, lead to the transmission

of the disease (Sarmadi, 1992, p. 203). From 1816 to 1922, six global cholera pandemics occurred (Barua, 1992, p. 7), and in all six cases, Shiraz was not lucky. Cholera and its prevalence have a direct relationship with compliance with health principles (Heydari, 2017, p. 210). India was the center of cholera, and in the six global pandemics, four of them definitely had Indian origins (Barua, 1992, pp. 8-15). In the 1820 epidemic in Shiraz, when several soldiers infected with cholera returned from India to Oman and Bahrain, they transmitted cholera to these two cities (Barua, 1992, p. 8), and from there it reached Bushehr and Shiraz (Heydari, 2017, p. 211).

The spread of cholera in Shiraz had two main internal and external reasons; externally, the disease was related to pilgrimage and maritime trade with Indian origins. Internally, it was related to non-compliance with health standards and some wrong local traditions common among the people. The lack of safe drinking water and misguided beliefs, such as considering running water to be inherently clean, and practices like washing corpses in public water sources. In addition, natural disasters, such as earthquakes and famine, exacerbated the outbreak of cholera (Heydari, 2017, p. 215). People considered one of the reasons for the disease in Shiraz to be the presence of Indian soldiers and troops of the southern police force, whose lifestyle was unpleasant for Iranians (Roknzadeh Adamiat, 1978, Vol. 2, p. 414). Many residents attributed the disease to the presence of Indian soldiers and the southern police force, whose living conditions were deemed unsanitary by Iranian standards (Roknzadeh Adamiat, 1978, Vol. 2, p. 414). Famine and food shortages further worsened public health, leading to deaths from starvation and exposure during winter. These dire conditions, combined with poor hygiene, facilitated the rapid spread of cholera (Etehadieh, Pira, and Rouhi, 2014, pp. 108–109).

The spread of cholera started once again around October 1917, and both the rich and the poor died from this disease (Etehadieh, Pira, and Rouhi, 2014, p. 109). It first started from the Dareh Shuli tribe of Qashqai and spread to Kazerun, prompting Farmanfarma to impose a quarantine. Several Iranian doctors, such as Haidar Mirza, and several Christian doctors, such as Dr. Carr, traveled to *Dasht-e Arjan* to enforce quarantine, but cholera reached Bardej in eastern Shiraz, and despite the presence of military guards, the death toll rose to a hundred per day. Several other doctors, such as Dr. Mirza Jafar Khan Tehrani, were also sent to Bordj, but after two days, they fled back to the city, and the disease started in Shiraz as well. First, two people were infected in *Darb-e Shazdeh*, and then it spread to other neighborhoods. The first cases in Shiraz appeared in *Darb-e Shazdeh* before spreading to other neighborhoods. Medical professionals were required to report all cholera cases to local commissioners, who would then notify central authorities via telephone. Police officers would disinfect the patient's home by spraying lime water and acidic solutions in the living spaces. If the patient died, their clothing, carpets, and bedding were burned to prevent further transmission. Fear of property destruction led many to conceal infections, undermining containment efforts (Raees al-Ateba, 2010, p. 160).

Observing sanitary measures in the alleys and waterways was severely neglected, particularly near the streams supplying drinking water to the Muslim population. Contaminated cholera-infected rags and garments were routinely washed in these waters, while just ten steps downstream, water carriers filled their bags from the same source to deliver to households. At times, the corpses of dead dogs, cats, and donkeys polluted the streams, yet the water continued to flow unchecked. It was only after the cholera outbreak that

people turned to well water as an alternative (Raees al-Ateba, 2010, pp. 166-172). The Raees al-Ateba further documents that on January 17, 1918, violent clashes between the Kazerunis and the British army resulted in approximately two hundred fatalities. The British officers were buried in *Bagh-e Takht*, their graves treated with lime water. In contrast, Indian soldiers were thrown into mass pits and covered with a mixture of lime water and mud, while Hindu casualties were cremated in groups of ten. The burning corpses filled the air with smoke and infection for three days. Compounding the crisis, the city's sewage processing plants—located in nearly every district—emitted foul vapors, blending with the stench of burning bodies. This putrid atmosphere not only worsened air quality but also accelerated the spread of cholera (Raees al-Ateba, 2010, pp. 166-172).

The Raees al-Ateba provides crucial context about the so-called "*sewage cooking factory*" through these observations: In the Saheb Divani caravanserai - which adjoined the bazaar - Indian soldiers had constructed a furnace for burning human waste. The resulting stench had become intolerable for local residents and shopkeepers. A February 28, 1918, report warned that if this practice continued, particularly with warmer weather approaching, the noxious fumes would likely spread disease. This prediction proved accurate, as subsequent reports from March 4 of the same year documented the first case of cholera in the area (Etehadieh, Pira, and Rouhi, 2014, pp. 150-156).

In response to the cholera outbreak in Shiraz, initial sanitary measures were implemented under Farmanfarma's orders. These included prohibiting Indian residents from washing clothes in public water streams, mandating the use of well water for drinking, and advising against the consumption of raw vegetables like lettuce. Medical protocols required doctors to visit infected households immediately upon notification. After treatment, both the patient and their family were placed under quarantine. However, these efforts were often undermined by widespread misinformation and distrust. For instance, Nawab Razzaz, a contemporary witness, claimed that doctors were intentionally killing patients by administering poisonous medicines. He described his own alarming reaction to treatment: "*I put some medicine in my mouth, and my whole body immediately became feverish, with blood emerging*." Such accounts fueled conspiracy theories, including the belief that foreigners had deliberately introduced cholera to Shiraz. Skeptics argued that the disease was absent elsewhere and accused authorities of complicity—even alleging that gravediggers were forced to prepare fifty graves in advance (Etehadieh, Pira, and Rouhi, 2014, pp. 163-639).

Cholera subsided at the end of March that year, but it broke out again after a few days. The bodies were burned, and lime was poured at the homes of the deceased. On March 15th, thirteen people died from Cholera, which the Raees al-Ateba called a special disease. The highest number of cholera deaths occurred in March and April of 1918 (Etehadieh, Pira, and Rouhi, 2014, pp. 109-722). In the Fars newspaper, January 1918 is described as the time of public infection and divine test (Banan al-Molk, 1917a, p. 6). This disease was widespread among the people for a year, until influenza returned in October, the winter of 1918 (Farmanfarmaeian, 2003, p. 252). According to Seyed Mirza Ala al-Din Hossein, the Raees al-Ateba believed that famine, locusts, water shortages, and low rainfall caused cholera. He thought the people of Fars should monitor their actions so that God might change their condition (Raees al-Ateba, 2010, p. 160). Cholera, famine, and the problems they caused have left a lasting mark in the history of Shiraz and Fars, to the point that the

term "*year of Cholera*" is still commonly used among the people.

The Relationship of Farmani's Poorhouses with Cholera

Much of the information available about cholera, which is referred to as a special disease and a well-known illness (Etehadieh, Pira, and Rouhi, 2014, pp. 196-215), consists of reports submitted to police stations that detail the actions of the poorhouses. The responsibility for collecting, shrouding, and burying the deceased without guardians, both inside these buildings and throughout the city during the two years of constructing the poorhouses, lay with them. For the nine months from November 14, 1916, to September 1917, expenses included items such as medicine, doctors, and pharmacists. Other expenses covered shrouding and burial of the urban poor and the poorhouse residents, baking bread and food, firewood, and *Eid al-Fitr* clothing (Etehadieh, and Saadvandian, 1987, pp. 346-347).

The police station reports reveal several instances of hiding and burying the dead: one person died near the post office, and the staff of the poorhouse collected the body. There is also a report of a sick, impoverished man escaping from the poorhouse and later dying (Etehadieh, Pira, and Rouhi, 2014, p. 210), whose care might have helped him recover. Among the reports, there's an account of a patient dying from vomiting and diarrhea in poorhouse number 5 (Etehadieh, Pira and Rouhi, 2014, pp. 162-222). Besides the seven poorhouses, two hospitals are mentioned; one is Farmani's Behbudestan with about sixty beds and supplies for homeless and poor patients, and the other is outside the city, designated for foreign cholera patients with no available space (Raees al-Ateba, 2010, p. 160; Shirazi, 1918, p. 16).

Providing food, bread, and safe water, which are factors in the spread of cholera, was the responsibility of the poorhouses (Roknzadeh Adamiat, 1978, Vol. 2, p. 324). World War I, drought, and locust infestations caused a food shortage, which, for people whose main livelihood was selling agricultural products, led to increased poverty and exorbitant prices for goods. This resulted in a large number of people in Fars and Shiraz going hungry. Villagers were also forced to leave their villages during these years and search for small amounts of food in city alleys and passages. People were compelled to use unhealthy water from streams. By gathering the poor from the city and transferring them to the poorhouses—where their basic needs, such as clean sheets, clothes, healthy food, water, and necessary firewood and heating for living and bathing were provided—authorities both prevented crowding in the passages and reduced disease transmission. Additionally, providing basic needs increased their physical strength and lowered disease spread. Supplying the necessary medicine and establishing clinics within the poorhouse, along with two hospitals dedicated to cholera patients, ensured proper patient care, adherence to health standards, and effective treatment.

Conclusion

World War I, the global famine, eight years of locust infestation, drought, and internal conflicts created difficult conditions in the city of Shiraz. Abdolhossein Mirza Farmanfarma, the then ruler of Shiraz, started building several poorhouses in different parts of the city, where the needy and orphans could be safe from hunger and the cold winter. These poorhouses proved crucial when cholera erupted in 1917, causing many casualties

in both urban and rural areas. It was noted that contaminated water, food, belongings, and non-compliance with health standards were responsible for transmitting the disease. Therefore, the following measures were taken: constructing a water well at the poorhouse to reduce reliance on contaminated water; providing healthy bread and food to boost people's strength; collecting and isolating the homeless to limit disease spread; providing clothing and bedding and monitoring their health; implementing immediate quarantine for symptomatic cases; building a cholera hospital with doctors and medicine; collecting, shrouding, and burying infected bodies; and supplying coal to heat public baths and ensure sanitation standards. These actions greatly helped in controlling and reducing the death rate in Shiraz.

Authors' Contribution

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Conflict of Interest

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