

## Askeri Sağlık Hizmetleri Tarihi ile İlgili Bir Araştırma: Kırım Savaşı ve Florence Nightingale

### [A Historical Survey of Military Health Services: The Crimean War and Florence Nightingale]

#### ÖZET

Kırım savaşı boyunca müttefik orduları için dondurucu soğuk ve bulaşıcı hastalıklar Rus askerlerinden daha önemliydi. Tifüs, skorbüt, kolera ve sıtma çok sayıda askerin ölümüne neden oldu. Kaynaklara göre bulaşıcı hastalıklar savaş nedeni ölümlerden 10 kat daha fazla ölüme neden olmuştur. Böylece Avrupa orduları savaş esnasında hastalıkların tedavisinin önemini kavramış ve Kırım Savaşı askeri sağlık konseptinin gelişmesinde dönüm noktası haline gelmiştir. Florence Nightingale ve beraberindeki 38 gönüllü İstanbul'daki İngiliz kışlarında yatakların temiz olmasını, ortamın havalandırılmasını, atıkların bertaraf edilmesini sağlayıp günlük temizlik uygulamalarını yeniden düzenlediler. Nightingale sanitasyonun ilk teorisyenlerinden ve modern hemşirelik uygulamalarını ilk uygulayanlardan biridir. Nightingale, hastanelerde hastaların sanitasyonu, beslenmesi ve aktivitelerini geliştirmek için çalışmıştır. Bu gibi önlemlerin alınması ile ölüm oranlarının dramatik bir şekilde azaldığı görülmüştür.

#### SUMMARY

During the Crimean War freezing cold and contagious diseases was more important than the Russian soldiers for the allied armies. Typhus, scorbüt, cholera and malaria prepare the dead of a large number of soldiers. According to the resources, the contagious diseases led to death more than ten times of the military actions. That's why, The European armies understood the importance of the treatment diseases in the war and the Crimean War became the beginning point in military health concept development. Florence Nightingale and a staff of 38 volunteers provide clean bedding, improve ventilation and sewage disposal, and reorganize everyday sanitary procedures at British barracks in Istanbul. She was an early theorist of sanitation and one of the founders of the modern nursing profession. Nightingale worked to improve sanitation, nutrition, and activity of patients at hospitals. Death rates were reduced dramatically with the introduction of such measures.

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#### Anahtar Kelimeler:

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### A WAR CHANGING THE MILITARY HEALTH CONCEPT

Although the Crimean War seems to be a war between the Ottoman and Russian with the support of England and France, in reality, it was a power struggle between the biggest European countries. The cooperation between England - Ottoman Empire and France in the Crimean War mainly determined the result of the war. The Crimean War should not only be evaluated in military and political aspect, but also from other perspectives. One of the most important problems for the allied armies in Istanbul and Crimea was related to the health concepts. During the two years long war, problems were the freezing cold and contagious diseases before the Russian soldiers. Although the allied armies won the battle but all the sides fighting in the war lost many

people due to contagious diseases. According to the resources, the contagious diseases such as, typhus, cholera and malaria led to the deaths of more than ten times of the people who were in the battle field. That's why, The European armies understood the importance of the treatment diseases in the war and gave importance to the development of military medical services and from this point the Crimean War became the beginning of an important development in military health concept.

### THE WAR AND THE DISEASES

Allied armies, who came to Istanbul, wanted some buildings belonging to the Ottoman state for their soldiers. The buildings belonging to the Navy, Military School and Military Medical School were

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given to allied states to be used as barracks and hospitals (1).

At the beginning of the war the largest British military hospital, was in Selimiye Barracks, in İstanbul-Üsküdar. Selimiye Barracs was converted into a hospital with a capacity of 3200 beds, and divided four services in 1855 and five services in 1856. When the number of the patient and injured exceeded the capacity of this hospital, new British military hospitals were established in Tarabya, Kuleli and Izmir (2).

Over time, when these hospitals became inadequate the Turkish Cavalry Barracks (Kuleli Barracs) in Çengelköy is used as a hospital. A building –later called British Hospital- in Beyoğlu, Sultan Pavilion in Tarabya, Haydarpaşa Military Hospital, Kavak Pavilion near Selimiye Barracks in Üsküdar has been devoted to the British Sailors as hospital (3). In addition, the British ship called Mumbai and the Ottoman old ship called Mesudiye used by the British as a hospital ship (4).

Russia's cold climate and infectious diseases had great blow to the allied armies. Instead of fighting the Russians, thousands of officers and soldiers had to fight the diseases. During the Crimean War many soldiers lost their lives because of the unhealthy conditions of the hospital. 80% of the deaths caused by diseases, also Allied commanders Lord Raglan and St. Arnaud has been one of the victims (Table 1) (5).

Cholera which was the one of epidemic and effective disease during the war and post-war period has been the leading cause of death. The first cholera pandemic began in India but could reach İstanbul at 1831 because of the slowness of the transportation

facilities. Spread over the entire Ottoman Empire in 1832 (6). 1847–1848 epidemic 4275 patients of 9237 died in İstanbul. During the war, the main source of the first cholera epidemic in the Mediterranean was the cruise ships, leaving from the South of France, especially Marseilles. French soldiers, who will go to Crimea, came to Gallipoli by the cruise ships. The hospitalized French soldiers at Gallipoli Hospital caused epidemic in Gallipoli. In İstanbul, cholera was seen in Davutpaşa barracks which allocated to the French. Illness infected British and Ottoman soldiers and began to spread city-wide. 3500 people lost their lives as a result of epidemic ongoing 10 months (7).

The other epidemic disease Typhus has been seen in the war especially between the French and Ottoman troops. 19648 typhus cases have been seen in the Crimea in 1855, 2400 of them died and the other 8738 patients brought to hospitals in İstanbul. 82 of 450 French doctor died because of typhus (8).

Crimean fever has been another more common epidemic disease which described as threatening disease to many people during the war. Florence Nightingale has been the most well-known victim of this disease. Although this disease has not been adopted in fatal, due to last very long of recovery period Allies military power has been weakened (9). Syphilis has been recognized as an epidemic disease and incidence of syphilis increased during the war and needed to be taken measures at the post-war period. In 1856-1858, after the Crimean War, the first brothels was opened in İstanbul and Greek, Armenian, Jewish and foreign women have been worked around here for getting under control of prostitution (9,10).

**Table 1.** Ottoman and Allied Armies' Casualty Numbers at Crimean War

Allied Armies	Number of Soldiers	Death By Injury	Death By Diseases	Total
<b>French</b>	309.268	20.240 (%6,5)	75.375 (%24,4)	95.615 (%30,9)
<b>British</b>	97.864	4.602 (%4,7)	17.580 (%18,0)	22.182 (%22,7)
<b>Sardinian</b>	21.000	28 (%0,1)	2.166 (%10,3)	2194 (%10,4)
<b>Ottoman</b>	- -	- -	- -	35.000
<b>Ausrtian</b>	283.000	- -	35.000 (%12,4)	35.000 (%12,4)
<b>Total</b>	711.132	24.870 (%3,5)	130.121 (%18,3)	189.991 (%26,7)

As seen at Table 2, the number of sick and wounded personnel and mortality rates in the British Hospitals between January 10, 1854 and April 30, 1855, was as: 56057 patients and wounded admitted to hospitals, 23587 of them were admitted because of abdominal and intestinal diseases, 4556 of them died. 2023 soldiers died because of cold climate. 4158 soldiers with battle injury and wounded in action, only 644 of them died. Of the 28939 soldiers suffering from scurvy 2093 died. 10970 soldiers died because of high fever. Because of the all diseases the total mortality rates were 35% in soldiers and 2.5% in the officers (11). These numbers show that, in spite of all the measures taken, deaths due to the poor conditions in the allied armies were higher than killed in action.

**Table 2.** Causes of Death of 56057 Patients Hospitalized in British Hospitals

Causes of Death	Numbers of Death	Rates
Abdominal and intestinal diseases	4556	%22,4
Cold climate	2023	%9,9
Battle injury	664	%3,2
Scurvy	2093	%10,3
High fever	10970	%54,2
Total	20306	%100

### FLORENCE NIGHTINGALE AND BEGINNING OF MODERN SANITATION

The Crimean War (1854–1855) underscored the importance of organized evacuation and surgical care close to the front line. The war revealed a stark contrast between the battlefield care provided by the French, with their expert organization and system of light ambulances, and the poorly organized British Medical Services. Outrage over the poor treatment offered to the British wounded led the War Office to send a young nurse, Florence Nightingale (1820–1910), and a staff of 38 volunteers to the British barracks in Istanbul, Turkey. In 1847 she visited many of the hospitals in Italy and the South of France and made herself acquainted with the system and working of these establishments. On the 21. Oct. 1854 she left England under the protection of her devoted friends Mr. and Mrs. Bracebridge and accompanied by her staff of Nurses. (11). Nightingale's first act was to thoroughly scrub the hospital, provide clean bedding, improve ventilation

and sewage disposal, and reorganize everyday sanitary procedures. She was an early theorist of sanitation and the design of hospital buildings. Although her efforts created intense resentment in the army bureaucracy, she was one of the founders of the modern nursing profession (12). She broke the monopoly of health care as the sole providence of the physician, which led to the development of the healthcare team in modern medical practice. Diseases such as typhus, typhoid, cholera, and dysentery were rife in the army hospitals. Many more soldiers were dying from diseases than from wounds. Nightingale worked towards improvements in sanitation, nutrition, and activity for the patients of the hospitals. Death rates were reduced dramatically with the introduction of such measures. Florence Nightingale's healing practices and kept statistics of the environment, environmental sanitation, personal hygiene, practices of patient care such as the importance of hand washing, the mortality rate was reduced from 42% to 2.2% (13). Nightingale kept meticulous records of the number of deaths, and the causes of deaths, so that on her return to Great Britain she could justify the need for improving conditions in hospitals. She has become one of the national symbols of England after the Crimean War (2).

### HOSPITALS AND MILITARY HEALTH SYSTEMS OF ALLIED ARMIES

During the Crimean War, there were 14 French hospitals with a total of around 10,000 patient capacities (shown in Figure 1). The French hospitals were Beyoğlu Hospital (1500-2000 bed capacity), Dolmabahçe Hospital (600 beds), Davutpaşa Hospital (1200 beds), Gulhane Hospital (1400 beds), Ramiz Farm Hospital (1200 beds), Encampment Hospital (with a capacity of 600 beds), War College Hospital (1100 beds), Maltepe Hospital (400 beds), Maslak Hospital (500 beds), Kanlıca Hospital (250 beds), the Russian Embassy's Hospital (200 beds), Varna Hospitals (capacity of 500 beds), Nagara Hospital (500 beds) and Gallipoli Hospital (500 beds) (4).

The French hospitals Beyoğlu and Gulhane were allocated sick and wounded soldiers, the patients with cholera were admitted Military Medical Hospital, and the patients healed or would be sent to their home were evacuated to Dolmabahçe Hospital. The Russian Embassy building in Beyoğlu, converted to a hospital with 60 beds for officers and a French Naval Hospital was opened in Tarabya (11). During the cholera epidemic that began in 1854, two French military hospitals and three tent hospitals in Varna fell down on patients, upon this two of three ships of the navy

waiting at the coast of Varna, was used as a floating hospital (4).

The Sardinian Hospital was at Yenikoi about half a mile to the south of Therapia. It consisted of excellent wooden huts, built on a healthy spot, containing about 1,000 patients. Before their arrangements for accommodating so many were completed, the possibility of having to admit some of their sick into our Barrack-Hospital was contemplated; the General Hospital at Kuleli was subsequently placed at their disposal, but they never found it necessary to occupy it. In the spring of 1856 part of their hospital was burnt down; no lives were sacrificed but the sisters and medical officers lost part of their property (11).

There were some various civil hospitals for the different native tribes, nearly every European nation has its own special hospital. The old English hospital behind the Embassy was certainly the worst of all the civil hospitals, French Hospital at the top of the Pera Street near the Gran-Campo, The Austrians have a hospital at Galata containing about 50 beds. The Prussian hospital in Pera was very small and poor and contained 60 beds, German hospital called the Evangelical Hospital, and also a small Sardinian one; both are insignificant. The majority of the patients in these various civil hospitals are generally sailors (11).

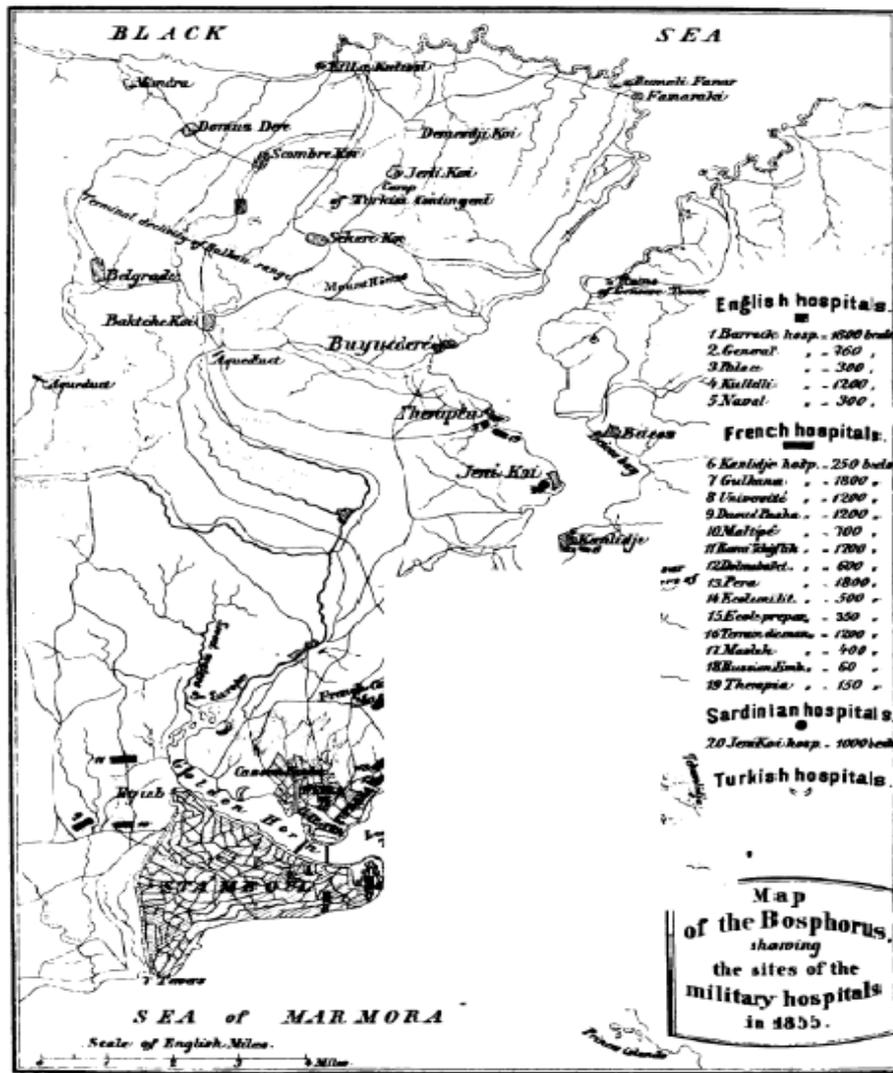


Figure 1. Map showing the location of the Allied hospitals during the Crimean War (11).

During the Crimean War French military health services had better condition than the British's. However, the first months of 1856 was a complete disaster for the French, in the first quarter of 1856 53.000 sick and wounded soldiers admitted to the French military hospital in Istanbul. In January and February, average of 240 sick and wounded people lost their lives daily. The majority of deaths were due to the typhus disease (8).

Totally 95.000 French soldiers were died during the Crimean War, 20.000 of them were died on the battlefield, 75.000 of them were died in the hospitals due to infectious diseases. Deaths of the diseases were four times more than killed in action (2). In the first quarter of 1855 the French hospitals' mortality rate was 13%. In 1856, this proportion increased to 20%. Hospital gangrene was the first cause of death. After Sevastopol conquest most deaths were seen due to typhus and cholera (11).

Between 1855 and 1858, the most important disease was scurvy in Crimean War, so Ottoman soldiers with scurvy sent to Varna where plenty of fruits had. In the French army, 19.648 cases of typhus were seen in the Crimea in February 1855, 2.400 of these patients were died. 82 of 450 French military doctors died because of typhus. Florence Nightingale deposited patients separately rooms according to the disease, thus providing a great many wounded soldiers to get rid of typhus, in proportion to the number of dead was reduced by three quarters. As one of the benefit of this implementation, none of the 448 deployed British military doctors is died because of disease. (8).

The Ottoman Empire left such large hospitals Haydarpaşa and Kadıkoy to the British and to the French; she used the bed capacity of hospitals ranging from 40 to 300. There are five on the Asiatic side, in and near Scutari, three in Stamboul and four on the other side of the Golden Horn. A small hospital is also attached to the School of Medicine, Tebieh, situated at Combarhana, high up the Golden Horn. In the School of Medicine in the Golden Horn, 600-bed hospital was established for the sailors and Mesudiye and Syria named vessels was used as a hospital ship. The Turkish hospitals are all kept admirably clean, they have a good supply of water, but fresh air is greatly wanted. Their medical officers are chiefly Italians, Armenians and Greeks, educated partly in France and Germany, partly at the medical school of Constantinople under French and German Professors.(11)

The Turkish army intended to establish a central hospital for the army level military units and

temporary field hospitals for the divisional strength of the troops. Central hospitals planned to be around the centre of the army, at the clean, airy, and the establishment of a central location, to protect patients and the hospital building materials from the sun and the rain, to be at least 1,200 beds, with the surgeon general, two deputy chief physician, 1 chief of surgery, 12 doctors , 1 chief pharmacist, 2 deputy chief of surgery, 36 surgeons, 2 deputy chief pharmacist, 16 pharmacists, 12 nurses, 24 janitor, 12 janitor who understands medicine and pharmacology, possession, pallet for each patient, two-bed cover, two pillow cases, a comforter, two quilt sheet, two pillow sheet, two shirt, three briefs, three drapery, three headgear, a cardigan, a shoe, two towels, two socks, a spittoon, a bucket, a soup cup, a plate and a tray (14).

Surgeons interested in health issues for many years in the army in the Ottoman Empire, doctors did duty temporary during the war. There was not a strong central army before III. Selim- II. Mahmoud reforms so the military hospitals were not needed. Military hospitals have been established during the time of III. Selim for the first time. Taking care of the sick and wounded were made in hospitals that located in Istanbul during the Crimean War. These hospitals: Toptaşı Military Hospital, Tophane-i Amire Hospital, Bab-ı Serasker Military Hospital, War Ammunition (Zeytinburnu) Military Hospital, Maiden's Tower Military Hospital, Gümüşsuyu Military Hospital, Tarabya Military Hospital and Topkapı Hospital (9,15).

Ottomans modified the galleons which lost the war characteristics, unused, and anchored in the harbour, brought into a hospital ship such as Mesudiye and Syria Frigates (13). Russians and French used hospital ship for evacuating patients. At the same time the bilge of French hospital ships were used as an infirmary (9).

In the Crimean War, shortage of qualified health personnel and lack of the practical Ottoman Empire cannot be able to establish an effective military health care system. With the addition of lack of medicines, medical tools and instruments to the lack of staff the Turkish army lost soldiers largely due to diseases such as cholera, typhoid, and typhus.

## **CONCLUSION**

As a result, during the Crimean War the cold side of the war once again appeared on, and led to the deaths of thousands of people. During the war took place between the Allied States and Russia soldiers

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died fighting in the front three or four times more soldiers died due to poor health conditions. The cold climate of the Crimea region, the distance from the allied states, malnutrition and disease conditions have been effective on being more and more casualties. Because of an ineffective health care organization of Allied states, the lack of a sufficient number of health personnel and medical apparatus and hospital buildings, unsuitable health conditions, establishing the large number of the hospitals in Istanbul, Çanakkale, Izmir which is far from war zones some problems have been experienced in areas such as transfers of sick and injured and increasing the losses (16).

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