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# The Lamp of Reform: Florence Nightingale's Health Interventions in Colonial India

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**Abstract**

Florence Nightingale (1820–1910) is widely recognised as a pioneering figure of public health reform. While her frontline work as a nurse during the Crimean War brought her lasting fame, her most enduring legacy can be found in decades of policy-driven advocacy, particularly in colonial India—a country she never visited but profoundly influenced. This article examines how Nightingale, without ever visiting India, exerted an influential impact on the public health sector in British India. Doing so, the article analyses her own writing, official sanitary reports, and correspondence between officials, alongside existing historiography. Through her collection and interpretation of data on British soldiers' health, her role in the establishment of the Royal Commission on Army Sanitation in 1859, and her advocacy for rural hygiene, hospital design, and nursing reforms, Nightingale vastly contributed to the early public health administration in British India. While Nightingale strongly promoted colonial military interests, she advanced humanitarian grounds for the colonised populations by advocating for their health welfare. By situating her dual legacy within the broader context, this article attempts to highlight the tension between imperial interests and humanitarian concerns.

**Key words:** Florence Nightingale, British India, military health, public health, sanitary reform, hospital reform.

## Introduction

*"It is simply a fact that you cannot keep British troops in health so long as you allow native populations in their vicinity to be decimated by epidemics."*[1]

With these words, Florence Nightingale articulated a principle that underpinned much of her work in India: the health of coloniser and colonised was interdependent. Though she never visited the subcontinent, Nightingale devoted over four decades to public health reform in British India. Her work began as an effort to reduce the alarming mortality rates among British soldiers stationed in India following the Crimean War, but it gradually expanded into a broader vision of sanitary reform that embraced Indian

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1 Florence Nightingale, *Florence Nightingale on Health in India*, ed. Gérard Vallée, *The Collected Works of Florence Nightingale*, vol. 9 (Waterloo, ON: Wilfrid Laurier University Press, 2004), p. 889.

civilians. This evolution reveals the dual character of her legacy, promoting British colonial interests and advocating for the welfare of the colonised.

Florence Nightingale (1820–1910) was born into an affluent and well-educated English family that afforded her intellectual freedom.[2] Trained in mathematics and in a religious vocation, she regarded health reform as both a scientific and moral calling. Nightingale is most widely known for her service in times of the Crimean War, when her overnight shifts as a devoted nurse in military hospitals gave her the enduring image of the "Lady with the Lamp."[3] However, her long-term impact lies in the decades that followed, during which she became a powerful advocate for public health policy. Her influence in India was particularly significant. She played an advisory role on the 1859 Royal Commission on the Sanitary State of the Army in India. Over time, she influenced hygienic engineering, hospital construction, and statistical reporting across the Raj, all from her base in London. Through voluminous and continuous correspondence with the India Office, British officials, and medical administrators, Nightingale helped structure how the colonial state approached disease prevention and institutional care.

This article argues that Nightingale's interventions in India illustrate a hybrid model of imperial public health, initially driven by military necessity but increasingly guided by a humanitarian ethos. Her efforts reflected both alignment with colonial priorities and a challenge to administrative inertia, with a call for attention to Indian welfare within a system that largely marginalised it. Thus, her work complicates easy distinctions between altruism and authority, showing how health reform under the empire was both a tool of governance and an expression of moral responsibility.

Based on Nightingale's letters, official sanitary reports, and the *Collected Works*, this article analyses her public health role in India within the broader context of nineteenth-century colonial medicine. It engages with the scholarly endeavours of historians such as Lynn McDonald and Jharna Gourlay to critically assess her legacy and the contradictions it embodied. The article begins with a review of the relevant literature that has shaped academic understanding of Nightingale's role in colonial health reform. It then examines her contributions to sanitation policy and statistical governance, highlighting how data-driven advocacy became one of the key tools in

2 For details see Edward Cook, *The Life of Florence Nightingale*, vol. 2 (London: Macmillan and Co., 1913).

3 Jharna Gourlay, *Florence Nightingale and the Health of the Raj* (Aldershot: Ashgate, 2003); Lee Wyndham, *The Lady with the Lamp: The Story of Florence Nightingale*, illus. Mort Künstler (New York: Scholastic, 1970), p.6.

shaping India's public health apparatus. After that, it explores her influence on hospital management and planning, and on the professionalisation of nursing, particularly through her advisory work on hospital design and her emphasis on establishing disciplined nursing care. Finally, the article considers the inherent tensions between Nightingale's reformist ideals and the structures of British imperial power, interrogating how her endeavours supported imperial ideology and colonial priorities, while often critiquing the colonial role in human welfare.

**Literature Review**

Early biographies of Nightingale often emphasised her Crimean War heroism and the founding of modern nursing, giving relatively little attention to her extensive work in India.[4] However, subsequent scholarship has significantly broadened our understanding of Nightingale as a public health reformer in British India. The Collected Works of Florence Nightingale, edited by Lynn McDonald and colleagues, has been especially important. Volume 9, *Florence Nightingale on Health in India*, and Volume 10, *Florence Nightingale on Social Change in India*, compile Nightingale's correspondence, reports and publications on India, revealing the scope of her 40-year involvement in Indian sanitary and social reforms.[5] These volumes trace how Nightingale's focus shifted from the narrow realm of Army health to the broader "social civilisation" of India, encompassing famine prevention, village sanitation, female education, and more.[6] The Collected Works make clear that Nightingale's Indian engagement was not a brief episode but a sustained, evolving campaign informed by extensive data collection and networking.

Historians of medicine and empire have analysed Nightingale's interventions in India from multiple angles. Jharna Gourlay's *Florence Nightingale and the Health of the Raj* (2003) provides a comprehensive political and social history of Nightingale's Indian endeavours. Gourlay has documented how Nightingale progressed from an initially imperialist outlook that aimed to safeguard British troops to a more inclusive stance advocating for the broader population in addressing health and social problems of British India. According to Gourlay, Nightingale's story illustrates how a woman in a patriarchal society could influence colonial policy without holding office.[7] Notably,

4 I. B. O'Malley, *Florence Nightingale, 1820–1856: A Study of Her Life Down to the End of the Crimean War* (London: Thornton Butterworth, 1931); Wyndham, *The Lady with the Lamp: The Story of Florence Nightingale.*

5 Nightingale, *Florence Nightingale on Health in India*, vol.9; Florence Nightingale, *Florence Nightingale on Wars and the War Office*, ed. Lynn McDonald, *The Collected Works of Florence Nightingale*, vol. 10 (Waterloo, ON: Wilfrid Laurier University Press, 2011).

6 Gourlay, *Florence Nightingale and the Health of the Raj.*

7 Ibid.

Gourlay has depicted Nightingale's "uncommon respect for Indian agency," supporting local participation in sanitation projects even when imperial attitudes were largely paternalistic.[8] This suggests that Nightingale was not solely an instrument of empire, but also developed into a critic of some colonial health and sanitation practices.

Other scholars have focused on Nightingale's methodological contributions. As a pioneer in applied statistics, Nightingale introduced novel visualisations such as the famous polar-area "rose" diagram to communicate the impact of unsanitary conditions on mortality.[9] Historians of statistics and public health note that her graphical presentation of Crimean War mortality data in the 1850s helped spur reforms in military healthcare.[10] K. Srinath Reddy has argued that Nightingale's innovative use of data "laid the groundwork for modern epidemiology" and public health surveillance systems.[11]

A substantial body of nursing history literature examines Nightingale's influence on hospital design and nursing in colonial contexts. Hays (1989) has emphasised that Florence Nightingale studied the health conditions of British troops and proposed reforms in military health reporting, sanitary engineering, and self-care practices, while collecting follow-up data to monitor progress.[12] More recent scholarship, including McDonald (2004, 2010), highlights her broader role in shaping public health governance across the empire.[13] Meanwhile, historians Preethi M. George and John Lourdusamy (2023) have highlighted Nightingale's role in early efforts to introduce trained nursing into hospitals in colonial India. They document that as early as 1865 Nightingale recommended sending experienced matrons from England to train nurses in India's civil hospitals – a plan the colonial government rejected on cost grounds.[14]

8 Ibid.

9 Mira Patel, "How Florence Nightingale Revolutionised Sanitation in India without Setting Foot in the Subcontinent," The Indian Express, March 7 2025, https://indianexpress.com/article/research/how-florence-nightingale-revolutionised-sanitation-in-india-without-setting-foot-in-the-subcontinent-9873924/; Nightingale, *Health in India*, vol. 9, p. 119.

10 Lee Brasseur, "Florence Nightingale's Visual Rhetoric in the Rose Diagrams", *Technical Communication Quarterly*, https://www.tandfonline.com/loi/htcq20.

11 "How Florence Nightingale Revolutionised Sanitation in India without Setting Foot in the Subcontinent," The Indian Express, July 5, 2025, https://indianexpress.com/article/research/how-florence-nightingale-revolutionised-sanitation-in-india-without-setting-foot-in-the-subcontinent-9873924/

12 Judith C. Hays, "Florence Nightingale and the India Sanitary Reforms," *Public Health Nursing 6*, no. 3 (1989): 152–54.

13 Lynn McDonald, *Florence Nightingale on Public Health Care: Collected Works of Florence Nightingale*, Vol. 6 (Waterloo, ON: Wilfrid Laurier University Press, 2004); Lynn McDonald, *Florence Nightingale at First Hand: Vision, Power, Legacy* (London: Continuum / Bloomsbury; Waterloo, ON: Wilfrid Laurier University Press, 2010).

14 Preethi Mariam George and John Bosco Lourdusam, "Trained Army Nurses in Colonial India: Early Experiences and Challenges," *Medical History* 67, no. 4 (2023): 349.

Such scholarship underscores Nightingale's broad vision: she saw trained nursing, healthy hospital environments, and sanitary public infrastructure as interconnected parts of a public health system.

Critical imperial histories have interrogated Nightingale's role within the colonial power structure. For example, Mark Harrison, in *Public Health in British India* (1994), has portrayed her as somewhat complicit in the imperial project, describing her as a cog in the British Raj's machine whose sanitary reforms for soldiers both advanced public health and reinforced colonial control.[15] Overall, scholarship recognises Nightingale as a pivotal figure in nineteenth-century public health whose influence extended beyond military confinement to shape sanitation and health policy in India. Building on this foundation, the article offers a more comprehensive account of her contribution to British India, showing how her interventions combined imperial priorities with moral advocacy, administrative rigour, and attention to Indian agency, exemplifying a hybrid public health ethos. Doing so, it examines both sides: examples of Nightingale's colonial voice, which reflected colonial interests, as well as evidence of her humanitarian commitments as reflected in her increasingly sharp condemnations of colonial misrule.

**Figure 1: Florence Nightingale**

Florence Nightingale was photographed in London a few months after returning home from war. At around this same time, she began working with data and charts. Credit: Hulton Archive/Getty Images

15 Mark Harrison, *Public Health in British India: Anglo-Indian Preventive Medicine, 1859–1914* (Cambridge: Cambridge University Press, 1994), pp. 62-66.

**Sanitary Reform and Statistical Health Governance in Colonial India**

Nightingale's experiences during the Crimean War convinced her that poor sanitation, rather than battle, was the primary killer of soldiers. Having witnessed firsthand the devastating effects of filth and disease on military mortality, she resolved to prevent similar tragedies wherever British troops were stationed. After the Crown assumed control from the East India Company in 1858, the British army in India became the largest concentration of British forces outside the United Kingdom, accounting for roughly one-third of all troops.[16] The survival of this force was highly threatened by disease and epidemics, which drew Nightingale's attention to India. She began systematically examining military health conditions in India using the same rigorous statistical and observational methods she had developed during the Crimean War.

The overwhelming figure of soldiers' mortality in India, which was approximately 69 per 1,000 per year, more than double the death rate of soldiers stationed in England, made her delve into the search for the causes.[17] Eventually, she came up with the findings that these deaths were not due to war or combat but due to diseases like cholera, dysentery, malaria, and typhoid.[18] Nightingale observed that the unhealthy living conditions of the soldiers were the main reason for this miserable situation. In an analysis published in 1863, Nightingale described the sanitary state of the army in India as a disgrace, attributing the carnage to filth, defective drainage, and contaminated water in the camps.[19] Her outrage was compounded by the knowledge that similar sanitary neglect had caused the majority of deaths in the Crimean camps and barracks, a lesson she believed the army should have already learned.[20]

Nightingale's response was grounded in statistical health governance, the idea that systematic data collection and analysis must guide public health action. In 1858–59, she successfully lobbied the British government to establish a Royal Commission on the sanitary conditions of India's Army, modelled on the earlier commission that had

16 Radhika Ramasubban, "Imperial health in British India, 1857-1900," in *Disease, Medicine and: Perspectives on Western Medicine and the Experience of European Expansion*, ed. Roy Macleod and Milton Lewis (Oxon: Routledge, 1988), p. 38.

17 Florence Nightingale, *How People May Live and Not Die in India: A Paper Read at the Meeting of the National Association for the Promotion of Social Science, Edinburgh, 1863. Reprinted by Order of the Council, August 1864* (London: Longman, Green, Longman, Roberts & Green, 1864), p. 2.

18 Ibid., p. 7.

19 Ibid., pp. 7–8.

20 Florence Nightingale, *Florence Nightingale on Women, Medicine, Midwifery, and Prostitution*, vol. 8, *The Collected Works of Florence Nightingale* (Waterloo, ON: Wilfrid Laurier University Press, 2005, xiii-xiv.

investigated Army health in Britain. Nightingale was the driving force behind this inquiry: she spent eight long months relentlessly petitioning officials. In her own words, she played the "importunate widow," a metaphor she used to describe how persistently she had to petition government officials to take action.[21] Once formed, Nightingale virtually took charge of the commission's research. She drafted detailed questionnaires that were sent to every military station in India, gathered voluminous statistical returns, and personally wrote much of the final report presented in 1863.[22] A fellow commissioner later acknowledged that Nightingale "participated extensively in the inquiries" and was instrumental in compiling the evidence.[23]

The commission's report, issued in 1863, painted a grim picture but provided an urge for reform. It documented unsanitary conditions – from open sewers in barracks to overcrowded living quarters and impure water supplies – that were decimating British troops.[24] To make the findings more compelling, Nightingale included striking statistical graphics. For example, she incorporated her innovative polar area diagram (the "rose" diagram), originally created to illustrate causes of mortality in the army in the East during the Crimean War. The visual impact of the diagram was so striking that military libraries initially baulked at stocking the report, finding it embarrassingly critical of Army management.[25] Nightingale applied the same statistical methods and visual logic to analyse mortality among British troops in India, using data-driven advocacy to push for sanitary reforms through the 1858–59 Royal Commission and subsequent policy recommendations. The diagram shows that the overwhelming majority of deaths of European soldiers in India were due to preventable diseases such as cholera, dysentery, and typhoid, while far fewer resulted from battle wounds or other causes.[26] Thus, Nightingale set a precedent for evidence-based public health advocacy—a method she carried forward to influence sanitation and health policy across British India.[27]

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21 Nightingale, *Health in India*, vol. 9, p. 87.

22 For details Nightingale, *Health in India*, vol. 9, p. 14.

23 George and Lourdusam, "Trained Army Nurses in Colonial India: Early Experiences and Challenges," p. 349.

24 For details see Florence Nightingale, *Observations on the Epidemics Contained in the Stationary Reports Submitted to Her by the Royal Commission on the Sanitary State of the Army in India* (Reprinted from the Report of the Royal Commission) (London: Edward Stanford, 1863).

25 Nightingale, *Health in India*, vol. 9, pp. 122-123.

26 Lynn McDonald, "Florence Nightingale, Statistics and the Crimean War," *Journal of the Royal Statistical Society Series A: Statistics in Society* 177, no. 3 (2014): 569–586.

27 For details see Florence Nightingale, *Mortality and Health Diagrams*, ed. RJ Andrews, with an introduction by Lynn McDonald, *Information Graphic Visionaries* series (London: Visionary Press, 2022).

Crucially, Nightingale did not stop at diagnosing the problem; she kept pursuing concrete sanitary reforms throughout India. She insisted that the commission's recommendations be implemented as policy, famously remarking that "when the commission is closed, its real work will begin."[28] The reforms she advocated were quite extensive, including the provision of piped clean water, proper sewage and drainage systems, regular removal of refuse, and the establishment of local sanitary committees to maintain hygiene in military barracks. In Nightingale's view, these measures were fundamental duties of good administration. Her pamphlet, *How People May Live and Not Die in India*, essentially a public health manifesto, warned that many military stations were so unhygienic that in a European climate they "would be… the cause of the Great Plague," potentially killing half the population.[29] Nightingale's message was clear that the colonial officials had to either prioritise hygiene and preventive measures, or continue to witness needless suffering and mortality of the soldiers.

Under Nightingale's sustained advocacy, and in line with broader administrative and military concerns, the British Indian administration began to take tangible steps toward sanitary reform. By the late 1860s, the Government of India had created provincial sanitary commissioners and introduced annual sanitary reports, which systematically documented recurring health and hygiene problems. These reports prompted a series of engineering and administrative interventions: military boards inspected barracks more rigorously, while army engineers improved ventilation, water provision, and latrine design in major cantonments.[30] Though progress was uneven and often slow, measurable improvements did occur. Mortality among British soldiers in India, which had averaged nearly 69 per 1,000 in the mid-1850s, fell to about 18.7 per 1,000 by 1870–71.[31] Nightingale interpreted this decline as evidence of the effectiveness of sanitary measures—cleaner water, better drainage, and improved barrack design. However, the available statistics thus far referred almost exclusively to European troops. The health of Indian sepoys and civilians received little systematic attention in official reports, reflecting colonial public health priorities that focused primarily on safeguarding the imperial army rather than the wider population.

Florence Nightingale's efforts, which began as an attempt to improve hygiene within barracks and cantonments, gradually expanded to the surrounding civilian areas—

28 Nightingale, *Health in India*, vol. 9, p. 45.
29 Nightingale, *How People May Live and Not Die in India,* p.15.
30 Government of India, *Annual Sanitary Reports, 1867–1870* (Calcutta: Office of the Superintendent of Government Printing, 1869–1872).
31 Florence Nightingale, *Life or Death in India* (London: Harrison and Sons, 1874), pp. 9-10, 22.

bazaars, villages, and towns near military stations—and eventually to the broader population across colonial India. After addressing the deplorable conditions of barracks and camps, Nightingale identified the adjoining Indian bazaars as the next critical frontier of public health reform. She regarded these bazaars as the real hotbeds of disease, where filth, overcrowding, stagnant water, and the absence of drainage created what she described as "the first savage stage of social life."[32] According to Nightingale, these bazaars symbolised the intimate interdependence of military and civilian health. She repeatedly warned that no cantonment could remain healthy while surrounded by such "pestilential" bazaars.[33] Her sanitary recommendations included relocating bazaars to the leeward side of stations, regulating their layout, and ensuring access to clean water, drainage, and public latrines.[34]

As her vision evolved, Nightingale increasingly emphasised promoting public health and sanitation among the vast majority of the population. She believed that the health of the nation depended on improving village conditions and that any enduring reform must begin at the rural level. This conviction led her to promote rural water supply projects, model hygienic villages, and basic health education. She urged colonial officials to introduce "a few model dwellings, with proper sanitary appliances, here and there" in villages, arguing that example is the best teacher for improving rural housing and public health.[35] By the 1870s, Nightingale was corresponding not just with British officers but also with Indian social reformers, princes, and educators about issues like irrigation, forestry to prevent droughts, and the training of village health workers.

Nightingale's correspondence reveals how she framed sanitary reform not only as a technical achievement but also as a moral and intellectual transformation. She believed that the success of sanitary measures could be measured as much by their influence on public consciousness as by declining mortality rates. In one 1869 letter, she exulted that the death rate in Bombay and Calcutta, among both Europeans and Indians, had fallen below that of London and Liverpool, which she hailed as a "victory."[36] More significantly, she claimed that local residents, once fatalistic about cholera and plague, were now increasingly demanding intervention from health authorities and recognising such deaths as preventable.[37] This shift toward public awareness and accountability was exactly what Nightingale hoped to achieve by injecting statistical transparency

32 Nightingale, *Health in India,* vol. 9, p.142.
33 Ibid., pp. 358, 360.
34 Ibid., p.361.
35 Ibid., pp. 361-362.
36 Ibid., p.636.
37 Ibid., pp. 636-637.

into governance. However, what Nightingale described as the "demand" of indigenous people must be read and considered with caution. While writing from London and relying on official reports, she likely interpreted colonial administrative observations as signs of popular awakening. Her use of "local people" probably referred to municipal elites and educated Indians rather than the wider populace. Thus, her claims about rising public consciousness reflected both sanitary engagement and the colonial state's tendency to translate only selective Indian responses into evidence of imperial progress.

Nevertheless, Nightingale's emphasis on data-driven health governance influenced India's emerging public-health apparatus. She promoted the collection of routine health statistics in the colony, encouraging cantonments and civil hospitals to maintain systematic records. As Jharna Gourlay and Gerard Vallée have shown, her advocacy helped instil a culture of empirical observation in colonial administration, even though it would be an overstatement to credit her with the creation of India's entire statistical infrastructure.[38] Nightingale's use of statistics can also be understood through what Michel Foucault later termed *governmentality*—the use of knowledge to discipline populations through administrative rationality.[39] Her visual and numerical representations of mortality transformed disease into an object of governance, rendering Indian bodies legible to the colonial state. While her intention was to implement and initiate health and sanitary reforms, her methods contributed to a bureaucratic apparatus that enabled surveillance and regulation in the colonial public health sector.

To conclude, it can be said that, through her contributions regarding health and sanitary reforms, Nightingale managed to save many lives and institutionalised a new model of public health governance in India. She demonstrated how statistical evidence could be leveraged to compel a colonial state to take responsibility for the health of its subjects and soldiers. By the end of the nineteenth century, India had a nascent public health infrastructure—imperfect and under-resourced, with limited reach—but certain aspects, such as sanitary regulation and statistical record-keeping in cantonments and urban hospitals, reflected principles similar to Nightingale's emphasis on prevention and hygiene as governmental responsibilities. The next section will examine how she also sought to reform hospital care and nursing, complementing these sanitary efforts.

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38 Gourlay, *Florence Nightingale and the Health of the Raj;* Nightingale, *Florence Nightingale on Health in India.*

39 For details see Michel Foucault, "Governmentality," in *The Foucault Effect: Studies in Governmentality*, ed. Graham Burchell, Colin Gordon, and Peter Miller (Chicago: University of Chicago Press, 1991).

**Hospital Administration and Nursing Reforms**

Florence Nightingale repeatedly pressed for hospitals and nursing reforms, both in Britain and India. In her *Notes on Hospitals* (first published in 1859), she outlined her vision for hospital design and management, where she emphasised ventilation, cleanliness, and spaciousness. Nightingale also advocated for preventing cross-infection, as hospitals for both Europeans and Indians were often notoriously overcrowded.[40] Nightingale's ideas laid the groundwork for advanced healthcare facilities in hospitals. Many of her suggested principles were gradually adopted by military and civilian hospitals across the British Empire.

Nightingale influenced hospital architecture and administration in India. She had strong opinions on hospital construction, famously criticising poorly designed hospitals such as the Barrack Hospital at Scutari and the new military hospital at Netley (England).[41] Her ideal "Nightingale ward" design – long, airy wards with cross-ventilation and ample light – became a template for British hospitals.[42] In India, the colonial government built new military hospitals from the 1860s onward, and these often incorporated Nightingale's recommendations: separating patients by sufficient distance, improving ventilation to mitigate the Indian climate, and providing isolation facilities for contagious cases.[43] Moreover, Nightingale had answered critics who questioned her authority over India by meticulously analysing data from Indian hospitals provided by statistician William Farr.[44] She demonstrated familiarity with conditions like heatstroke and liver disease prevalent in India, and pointed out that basic measures like ventilation and cleanliness could drastically reduce hospital mortality.[45] This evidence-based approach laid the foundation for improving hospital administration in India.

Another area of hospital reform that Nightingale promoted was diet and nutrition, as she believed that many patients in Indian hospitals suffered from malnutrition.[46] In her correspondence with the Bengal Sanitary Department, she argued that nutritious food was conducive to recovery. She emphasised the importance of improved hospital kitchens with trained staff supervising the preparation and distribution of food.[47] At

40 For details see Florence Nightingale, *Notes on Hospitals* (London: John W. Parker and Son, 1859).
41 Nightingale, *Notes on Hospitals*, pp. 36-37.
42 Ibid., pp. 75-78.
43 Ibid., pp. 9-10, 56.
44 Nightingale, *Health in India,* vol. 9, p. 110.
45 Nightingale, *Notes on Hospitals*, pp. 91-94.
46 Nightingale, Health in India, vol. 9, pp. 168-169, 291.
47 For details see Nightingale, *Notes on Hospitals*.

the same time, Nightingale realised the importance of culturally appropriate dietary variety for Indian patients, rather than the uniform rations commonly provided in colonial hospitals.[48]

Moreover, Nightingale's discussion extended to the Indian population at large as she believed that hospitals alone could not significantly uplift health if the broader environment was conducive to disease. Thus, she saw hospitals as part of a continuum: they should exemplify sanitary principles that communities could emulate. In one published letter to British Indian authorities, she even suggested creating travelling health lecturers with visual aids such as magic lantern slides to teach villagers about hygiene—an early concept of public health education.[49] By the 1880s and 1890s, Nightingale was contributing articles to Indian medical journals; notably, in 1891, she wrote a piece for an Indian public health journal urging the use of illustrated lectures in villages to demonstrate germ prevention, showing her continued engagement with practical health education in India.[50]

Another example of Nightingale's post-Crimean advocacy was a recognition of the need for trained female nurses in military hospitals. Prior to the 1860s, nursing duties in India's hospitals (as in much of the world) were performed by untrained men (orderlies) or by nuns and missionaries, and hospital conditions were chaotic.[51] Nightingale's war experience had convinced her that disciplined, educated women nurses could greatly improve patient outcomes. She became an ardent advocate for employing trained female nurses in the Army Medical Department.[52] The Royal Commission of 1859–63 on India not only investigated sanitation but also exposed the unsatisfactory state of nursing care for British troops in India.[53] Nightingale presented testimony and data showing that female nurses had helped reduce mortality in Crimea, arguing that similar measures were needed in India. She even recommended that female nurses in military hospitals be given authority over male orderlies to enforce hygiene and discipline—a radical notion for the time.[54]

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48 Nightingale, *Health in India*, vol. 9, pp. 152, 909.
49 Lynn McDonald, "Florence Nightingale's Nursing and Health Care: The Worldwide Legacy, As Seen on the Bicentenary of Her Birth," *SciMedicine Journal* 3, no. 1 (March 2021): 54, https://www.SciMedJournal.org
50 McDonald, "Florence Nightingale's Nursing and Health Care, p. 54.
51 George and Lourdusam, "Trained Army Nurses in Colonial India: Early Experiences and Challenges," pp. *348*- 349.
52 Nightingale, *Notes on Hospitals*, pp. 52-53.
53 George and Lourdusam, "Trained Army Nurses in Colonial India: Early Experiences and Challenges," p. 349.
54 Ibid., pp. 357-358.

Florence Nightingale's engagement with Indian nursing reform had an institutional vision. In 1865, Nightingale formally proposed sending a team of experienced matrons and nurses from England to India to start nurse training programs in major hospitals. This modest plan was initially rejected by the colonial government as too expensive.[55] Other than financial constraints, the reluctance reflected social attitudes: some officials felt Englishwomen should not be exposed to the "tropical dangers" and that their presence might disturb the all-male environments of military stations.[56] Undeterred, Nightingale sought allies in India. She found one in Lord Napier, the Governor of Madras Presidency, who was acquainted with her work. With Napier's support, the General Hospital in Madras began training local women (European, Eurasian, and Indian) as nurses in 1871 – one of the first such initiatives in Asia.[57] Over the subsequent decades, the presidencies of Bengal and Bombay followed suit, establishing nursing schools and hiring women as hospital nurses.[58] By the late 1880s, the Indian Medical Service had created the Indian Nursing Service for military hospitals, and the first batch of British Army Nursing Sisters arrived in India.[59] These developments aligned with Nightingale's vision of nursing reform in British India.

Through persistent advocacy, Nightingale influenced the state to initiate nursing development and modernise hospitals in colonial India. By 1900, trained nurses were recruited in major Indian hospitals, ensuring professional health care for both Europeans and Indians.[60] This represented a considerable shift from the haphazard, untrained care that prevailed when she first turned her attention to India in 1857. Nightingale's influence on hospital administration, together with sanitary reform, formed a holistic approach to health: clean water and clean wards, drainage for towns and discipline in hospitals—all necessary, in her view, to protect human lives.

At the same time, Nightingale's hospital and nursing reform initiatives must be viewed critically. Her initiatives often prioritised European patients and military hospitals, leaving Indian patients subject to persistently inadequate care. Since Nightingale never visited India, she relied primarily on reports, correspondence, and data from urban hospitals, particularly military and European institutions. Therefore, her recommendations were influenced by officials or urban-based representatives who

55 Ibid., p. 349.
56 Ibid., p. 350.
57 Ibid., p. 349.
58 Ibid.
59 Ibid., pp. 351-352.
60 For details see George and Lourdusam, "Trained Army Nurses in Colonial India: Early Experiences and Challenges."

represented only a small part of the whole of British India and had limited insight into rural realities where most Indians lived. Moreover, Nightingale promoted hospital and nursing reform ideas within a Eurocentric framework that assumed Western methods and discipline were universally applicable. Therefore, she left long- standing local medical knowledge and practices, broader structural inequalities, and institutional health care in rural areas largely unaddressed. Beyond that, implementation of her ideas was slow and uneven, constrained by bureaucratic resistance, financial limitations, and social norms. Many of her recommendations came into implementation after her lifetime.

**Imperial Framework and Colonial Implications**

Any evaluation of Florence Nightingale's work in India must grapple with its context within British colonial rule. Nightingale herself was a product of the Victorian imperial age, and her initial motivations aligned with imperial interests, namely, to reduce soldier mortality so that Britain could more effectively hold its colonial possessions. In a letter in 1858, she frankly stated that sanitary science must make "the military tenure of the country compatible with the safety of the army" – a clear nod to the strategic value of health in maintaining Britain's grip on India.[61] Western health reformers of the era, including Nightingale, commonly believed they were part of a "civilising mission" to bring European standards of cleanliness and order to colonies perceived as "filthy" or "backwards."[62] This view contained a large element of cultural paternalism. Nightingale's descriptions of Indian marketplaces (bazaars), as discussed earlier, often echoed colonial stereotypes that portrayed indigenous spaces with dirt, disorder, and moral decay. She characterised the bazaar as belonging to "the first savage stage of social life," a formulation that revealed the civilisational undertones of her sanitary vision.[63]

One of the key determinants of Nightingale's thought was likely the prevailing miasmatic theory of disease, which attributed the causes of diseases and epidemics to foul air, decaying matter, and environmental pollution. During the mid-nineteenth century, this view dominated the medical world, shaping public health perspectives and policies of various states. Figures such as William Farr reinforced the "disease of locality" framework, emphasising environmental conditions—stagnant water, poor

61 Nightingale, *Health in India,* vol. 9, p.53.
62 Nightingale, *How People May Live and Not Die in India, pp.* 7, 12,16; Nightingale, *Life or Death in India,* p. 13.
63 Nightingale, *Health in India*, vol. 9, p.142.

drainage, and filth —as the source of outbreaks rather than contaminated water or human carriers.[64] In the colonial context, this worldview reinforced the belief that India's climate, geography, and local practices produced disease, naturalising the association between the Indian environment and ill health. As part of it, for Nightingale, environmental purification became both a scientific remedy and a metaphor for Britain's moral 'cleansing' of the colony, linking sanitary reform to the broader civilising mission. Her recommendations for hospitals, barracks, and rural health initiatives emphasised the importance of systematic drainage, clean water, and hygienic living spaces for both human and imperial welfare.

Moreover, Nightingale's perception of India was shaped by reports and correspondence rather than practical experience in India. British officials consistently portrayed the Indian climate and culture as major causes of disease. British soldiers also regarded Indians, as Nightingale remarked, "more as wild beasts than fellow creatures."[65] Drawing on these long-distance reports and information as well as the influence of the prevalent miasmic notion of disease causation, Florence Nightingale adopted a civilising framework, reflecting a mindset of British superiority—even as she consistently advocated for humane treatment, a principle she had emphasised since the time of the Crimean War.

She believed that Britain was bringing "civilisation" to India and generally accepted the ideological and political legitimacy of colonial rule. In the early stages of her engagement with India, Nightingale reflected a distinctly paternalistic attitude, aligned with imperialist notions of the British as both educators and benefactors of the Indian population. As she herself declared, the task before the colonial state was inseparable from a broader civilising mission in India:

> How to bring a higher civilisation into India? What a work, what a noble task for a Government—no 'inglorious period of our dominion' that, but a most glorious one! That would be creating India anew. For God places His own power, His own life-giving laws in the hands of man. He permits man to create mankind by those laws—even as He permits man to destroy mankind by neglect of those laws.[66]

This statement revealed her view that sanitary reform was a moral mission through which Britain could spiritually and materially "renew" India. Her view of the Indian climate as a "bugbear" to be "tamed" further reveals how she linked disease and disorder in India to environmental and moral decay—problems that, in her mind, only

64 Harrison, *Public Health in British India*, pp. 101-102.
65 Nightingale, *Health in India*, vol. 9, p. 167.
66 Nightingale, *How People May Live and Not Die in India*, pp. 16–17.

Western science and governance could conquer.[67] Viewing critically, T.R. Metcalf has noted, Nightingale could be seen as embodying "an aggressive English imperialism in the guise of a mother's curative care for the 'sick child' that was India," reflecting how her humanitarian efforts were intertwined with paternalistic and colonial attitudes toward India.[68]

Critics have argued that Nightingale's reforms also served to strengthen imperial control. In line with Harrison's analysis, it appears that improvements in the health of British soldiers primarily reinforced colonial governance rather than directly benefiting the indigenous population.[69] From this perspective, sanitary reforms in the barracks were focused on military readiness, effectively strengthening British control over India rather than addressing the broader health needs of the population. Indeed, one of Nightingale's own justifications to reluctant officials was that preventing disease among Indians would protect Europeans, stating: "You cannot keep British troops in health so long as you allow native populations in their vicinity to be decimated by epidemics."[70] This argument treated Indian lives as instrumental to colonial security. Furthermore, many of Nightingale's recommendations were initially implemented in European enclaves and only slowly extended to the wider Indian population. For instance, pure water supply was prioritised for British cantonments long before Indian towns, and army hospitals improved faster than district clinics serving Indians. In that sense, her work fitted an imperial pattern of two-tiered development.

However, the imperial calculus does not fully capture Nightingale's evolving stance. As the decades went on, she became an outspoken critic of colonial negligence and exploitation. In *How People May Live and Not Die in India*, she lamented the lack of agency among India's people and questioned the moral basis of British rule:

> The people themselves have no power to prevent or remove these evils—which now stand as an impassable barrier against all progress. Government is everything in India. The time has gone past when India was considered a mere appanage of British commerce. In holding India, we must be able to show the moral right of our tenure.[71]

Although she continued to accept the legitimacy of British rule in India, her concern for the deteriorating health of India's rural population led her to confront the deeper structural causes of disease and poverty. In *Life or Death in India* (1874), she moved beyond sanitary reform to expose the economic foundations of ill health, criticising the

67 Nightingale, *Life or Death in India*, p. 6.
68 Nightingale, *Health in India*, vol. 9, p. 10.
69 Harrison, *Public Health in British India*, pp. 62- 65, 76,
70 Nightingale, *Health in India*, vol. 9, p. 889.
71 Quoted in Gourlay, *Florence Nightingale and the Health of the Raj,* p. 44.

very landholding system that underpinned colonial governance. She condemned the Permanent Settlement of 1793 in Bengal, arguing that it enriched zamindars while leaving cultivators destitute:

> Under the Permanent Settlement, the share of the produce of the soil left to the cultivator is often too little for health. A process of slow starvation may thus go on, which so enfeebles the great mass of the people that when any epidemic sets in, they are swept off wholesale.[72]

Florence Nightingale linked the "slow starvation" of Bengal's peasantry to the spread and fatality of epidemic disease, observing that famine and disease thrived where cultivators were impoverished and malnourished.[73] According to Nightingale, the Permanent Settlement was not merely an economic failure but a serious breach of public-health principles, an arrangement that drained India's peasant population and undermined both vitality and productivity. By connecting land tenure, nutrition, and epidemic mortality, Nightingale advanced a holistic critique of empire that revealed how economic exploitation translated directly into disease. In private correspondence with politicians such as MP Henry Fawcett in 1880, Nightingale lamented that India's millions had "no voice" in their own governance, and condemned Britain's extraction of land revenue without adequate reinvestment in Indian welfare.[74] Such remarks aligned her with some of the earliest critics of imperial economic policy and advocates of political reform in India.

Nightingale asserted that the recurrent famines in British India were the ultimate expression of people's chronic impoverishment. She regarded famine not as an act of providence but as a human-made disaster rooted in economic exploitation and administrative neglect. Writing in a scathing 1878 piece, she noted that five to six million had perished in the Madras famine of 1876–77 under Britain's watch.[75] She highlighted the cruelty of a system where "while wealth accumulates, men decay," pointing out that Bengal's ryots (peasants) were "little else than serfs" crushed by a landlord tax system imposed by Britain.[76] Such language is remarkably strong coming from a Victorian reformer: Nightingale was effectively accusing the colonial government of bleeding India's wealth "from the blood and bones of the people."[77] By linking famine, disease, and fragile economic structure, she reframed poverty itself as a sanitary crisis—making clear that colonial land policy, as in Bengal, and administrative neglect elsewhere, were fundamental causes of India's ill health.

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72 Nightingale, *Life or Death in India*, p.38.
73 Ibid.
74 Nightingale, *On Wars and the War Office*, vol. 10, pp. 158, 681.
75 Ibid., pp. 487, 496 and 499.
76 Ibid., pp. 435, 448 and 468.
77 Ibid.

Rejecting providential explanation, Nightingale argued that famine in India was not the result of providence or mere food shortage but a failure of governance and distribution—an argument that strikingly anticipates Amartya Sen's later analysis of famine as a crisis of entitlement and administration.[78] As early as 1868, she had rejoiced when irrigation projects gained approval, believing that irrigation and railroads could prevent disastrous periodical famines by transporting grain and water to drought-stricken areas.[79] After the devastating famine of 1877, she wrote, "India is not a mere 'dependency'… She is a part of ourselves," urging Britons to give generously to relief efforts and to treat Indian suffering as their own.[80] This appeal—addressed to the Lord Mayor of London—was a moral challenge to the British public to empathise with India rather than view it as a distant colony: "If English people knew what an Indian famine is—worse than a battlefield, worse even than a retreat, and this famine too, in its second year—there is not an English man, woman or child who would not give out of their abundance or out of their economy."[81]

It is also noteworthy that Nightingale sought out Indian collaborators and praised Indian initiatives. By the 1880s, she corresponded with Indian intellectuals like Romesh Chunder Dutt and educated Indians in the civil service. She welcomed, for example, the establishment of local municipal boards that included Indians, hoping these would empower Indians to address their communities' health and education needs.[82] Gourlay (2003) has observed that Nightingale gradually shifted from an imperialist mindset to advocating "power sharing," as evidenced by her support for Indians taking roles in public health administration.[83] In one instance, Nightingale commended local associations such as the Bengal Social Science Association for their grassroots efforts, highlighting that Indians themselves were taking up the cause of sanitation when given the knowledge and means.[84]

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78 Amartya Sen argues that famines are not caused solely by food scarcity but by failures in distribution and entitlement—people may starve even when food is available if they lack access to it. The key difference is that Nightingale framed famine in terms of administrative efficiency and moral responsibility, whereas Sen formalized famine as a failure of entitlement in economic terms. For details see Amartya Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981).

79 Nightingale, *Health in India*, vol. 9, p. 750.

80 Ibid, p,769.

81 Ibid.

82 Gourlay, *Florence Nightingale and the Health of the Raj*.

83 Ibid.

84 Gourlay, *Florence Nightingale and the Health of the Raj*., p. 14; Nightingale, *Health in India*, vol. 9, pp. 936-937.

To be sure, Nightingale remained within the framework of the British Empire—she did not call for an end to colonial rule. Her goal was to make that rule more humane and responsible—a stance that T. R. Metcalf describes as the Victorian ideology of benevolent improvement.[85] Adding to this, later critics such as Antoinette Burton have argued that such "benevolence" often masked paternalism and reinforced imperial hierarchies.[86] Nevertheless, compared to the prevailing attitudes of the Raj's administrators, Nightingale was often a radical advocate for the Indian people. She strongly criticised British officials for dismissing Indians as "niggers or tigers or at best purchasers of Manchester cottons," and she implored Britain to educate Indians in technical and sanitary sciences so that they could solve India's problems with appropriate knowledge.[87] In effect, she sought to ensure that the British invested in India's human capital and infrastructure, rather than merely exploiting its resources.

The imperial implications of Nightingale's work are therefore complex. On the one hand, her reforms served the empire's interests by improving the health of its army and administration and were embedded in a civilising rhetoric that justified continued British intervention in Indian society. On the other hand, her persistent advocacy for better governance, her exposure of neglect through data and moral argument, and her support for Indian participation in public health contributed to reforms that benefited local populations and helped lay the groundwork for a more systematic public health administration**.**

## Conclusion

This article has explored Florence Nightingale's involvement in British India, tracing her efforts in military sanitation, rural hygiene, hospital design, and nursing education. Nightingale did not visit India, and she communicated with the British officials working in India from London. Since she lacked direct experience of local conditions, her ideas and sanitary recommendations were shaped by several factors. Firstly, her firsthand experience during the Crimean War led her to understand how miserable the situation of British troops could be in India. Secondly, her views on disease causation were influenced by the miasmatic theory, prevalent almost throughout the nineteenth century, which attributed disease to miasma or environmental factors. Thirdly, the

85 T. R. Metcalf, *Ideologies of the Raj* (Cambridge: Cambridge University Press, 1994).
86 Antoinette Burton, *Burdens of History: British Feminists, Indian Women, and Imperial Culture, 1865–1915* (Chapel Hill: University of North Carolina Press, 1994).
87 Nightingale, *On Wars and the War Office*, vol. 10, pp. 147, 685.

reports and correspondence she received from British officials working across India informed her perspectives on health and sanitation.

Her work illustrates the complex interplay between imperial and humanitarian ideologies in the nineteenth century. While her writings often aligned with the colonial state's civilising mission, she was also sharply critical of the government for its failure to assume the responsibilities it owed to the colonised populations. Nightingale often portrayed poor and inadequate health and sanitation measures as reflecting the perceived filth of the colonised people and their environments. She also challenged government policies, addressing structural problems such as the Permanent Settlement in Bengal, which she believed exacerbated disease and suffering. Overall, her humanitarian commitments remained framed by assumptions of British superiority, echoing the civilising rhetoric of empire, even though she repeatedly advocated for more welfare governance. While being a non-official, Nightingale highlighted the pressing need for sanitary reforms, institutional care, and preventive health measures to be taken by the state. However, many of her proposals, including land reform and famine management, were hardly implemented, highlighting the limits of her influence within colonial bureaucracy.

Nightingale's initiatives in British India initially focused on the health of British soldiers but gradually expanded to include bazaars, villages, and towns, reflecting a broader vision of public health that encompassed both military and civilian populations. Her later writings on famine, land tenure, and economic exploitation demonstrate a growing awareness of the systemic causes of disease and suffering. In this way, she both humanised and indicted British rule, embodying the paradox of a reformer attempting to improve conditions within an inequitable system. Her methodology was primarily data-driven, relying on statistical analysis and constant correspondence. Her advocacy for statistical approaches helped shape later practices in British Indian administration; for example, subsequent annual sanitary reports systematically collected and analysed data to monitor public health across the region.

By tracing her evolving public health interventions in British India, this study has shown how individual agency, along with empirical rigour and moral advocacy, intersected with imperial public health governance. Her data-driven approach anticipated later models of global health, and her advocacy for health welfare remains relevant to contemporary debates on equity and governance. This study also sheds light on Nightingale's role as both the potential of individual agency to shape institutional

reform and the moral limits of benevolent imperialism. Her legacy, therefore, encompassed both contributions to public health and the constraints of operating within imperial structures. Neither an anti-imperialist nor a simple servant of empire, she navigated the constraints of colonial authority with conviction. Her lamp continued to symbolise both illumination and contradiction: the light of reform cast within the enduring shadow of empire.