European Proceedings of
Social and Behavioural Sciences
EpSBS

www.europeanproceedings.com
e-ISSN: 2357-1330

DOI: 10.15405/epsbs.2020.10.02.46

ICH 2019
International Conference on Humanities

BRITISH COLONIALISM: THE DEVELOPMENT OF HEALTH INSTITUTIONS IN PERAK, 1911-1939

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Abstract

This paper discusses the effects of British colonialism on the development of health institutions in Perak beginning before the First World War until after the recession. This study attempts to evaluate the establishment of a health institution during this period on whether it had justified the British fulfillment of the 'Whiteman's burden' mission or leverage its manipulation of hospital and disease control regulation as a tool to maintain its colonial presence. Based on the British Administration Report of Perak, Perak Government Gazette, along with other primary and secondary sources, this study discovered that the development of health institutions and hospitals during the British Imperialism phase is in the process of strengthening their power and economy exploitation in Perak between 1911 and 1939. The British had leveraged health institutions and hospitals as an element of 'social colonialism' to curb doubts and suspicion from the Malays and foreign labourers against the British administration. The health institution doubled as an institution to the influence of nationalism consciousness which began to flourished amongst the educated Malay of the Middle East and foreign labourers in estates and mines to oppose British colonization. Throughout the British administration until the 1930s, expenditures and financing of the cost of medical treatment and provision of rural health facilities were halted and limited to finance British expenses exclusively in Perak and this situation remained until the end of the first phase of the British administration in Perak.

Keywords: Health institutions, social colonialism, British administration, Perak.

https://doi.org/10.15405/epsbs.2020.10.02.46
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eISSN: 2357-1330

1. Introduction

This study examines the development of health institutions (including hospitals under the British administration in Perak between 1911 and 1939. Hassan and Raja (2013) discovered that contemporary studies on the British Administration of the Federated Malay States (FMS) in the 20th century touched on the medical and health administration of the FMS in 1911. She further stated that 1911 was the initial phase of coordinating FMS's health administration into a more systematic and orderly manner. The establishment of the aforementioned health administration is a British initiative in solving epidemic especially malaria which had infected the entirety of the local community and workers in the colonial FMS. This paper would focus solely on the role of the British in effectively eradicating infectious diseases without emphasizing the impact of British colonialism on the development of health institutions in the Malay States during the period studied.

Past researches identified the development of health institution in Perak under the British administration prior to the outbreak of World War I was a process of restoring health administration in Perak (Chew, 1992; Jap, 2007; Noor, 1999). Adnan (2005) research found that the mass influx of worker into Perak had contributed to the spread of contagious disease amongst residents, workers and British official by 1911. The British also oppressed the labourers by providing unsanitary living conditioned which in turn translated to several outbreaks of epidemic notably malaria within the FMS. Despite of the British oppression, the existing writings reflected British contribution in establishing health institutions and hospitals throughout their administration as a foundational necessities intended to safeguard the well-being of the local community and workers.

There is a need to link the development of British colonialism and the establishment of health institutions which is a part of their mission in the Malay States prior to examining the issue of British colonialism and its relevance in developing health institutions in Perak during the period studied. Hobsbawm (in Manderson, 1996) has outlined the development of Western imperialism, including the British and the introduction of health institutions until 1914; "it was viewed as a major change in economy and society which were foreshadowed by the outbreak of the First World War" (p. 4). For Manderson (1996), British' new colonialism' in the development of health institutions in the Malay States between 1900s and 1930s was classified as "the twinned relations of political and professional power" (p. 5). She further concluded that;

> the development of hospital institutions under the British administration during this period goes beyond ensuring the health of the officers, British troops, and investors; it also served as a survival mechanism of their imperialism to gain full control of economic and political resources in the Malaya." (Manderson, 1996, pp. 230-231).

The following discussed the British health administration and the operations of health institution and hospitals in Perak during the period studied. Harun (1988, 2007) clarified the formulation of British health policy in the FMS begun from 1911 to the outbreak of the First World War was in line with the British imperialism over the Malay States which have the potential to enhance British economy. The British had exploited the workers by manipulating the health and disease control policy which subsequently expands into the administration, economic and social life of the Malay States in order to safeguard their interest in Perak economic resources. The outspread of dangerous disease was assumed to

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be a British strategy to strengthen it colonial presence in Malaya including Perak. This in turn resulted with the expansion of hospital under the British colonialism which responds to the local people dependence on Western health and medical services similar with those of other colonies such as Africa and India. This phenomenon is commonly known as the "Whiteman's burden".

The British's colonial philosophy had witnessed health institutions being introduced in a colonized country as "apart from the humanitarian aspect of the question, they can be no doubt that money, judiciously and carefully spent on sanitary measures would bring its reward in the shape of revenue" (Wiggins, C.A. as cited in Manderson, 1996, p. 6). Meanwhile, MacLeod synonymous with the study of the history of colonialism had noted that "the period of 'new colonialism' which dates from 1815 to the Second World War saw the operations of British health institutions and hospitals in colonized countries, including Malaya as a cultural agency of the development of Western civilization" (Manderson, 1996, p. 6). Based on the arguments of the aforementioned scholars, British colonialism in Malaya, mainly in Perak could be divided into two phases. The first phase of British colonialism began from the late 19th century until the formation of the FMS, while the second phase began right after the establishment of the FMS until after the Second World War.

Nonetheless, British social colonialism in this phase reached its pinnacle of colonialism, which reflected the change in the British administration during the co-ordination of the FMS health administration in 1911. During this phase, the British had introduced open policy on providing health and medical services to the local peoples. By introducing the aforementioned policy, the British were able to maintain their economic and administrative interests instead of fulfilling the principle of 'white people' burden. As a matter of fact, the indigenous people dissatisfaction towards the spread of infectious diseases had threaten the stability of the British administration in Perak and to address this threat the British formulated open policy and expanded the construction of health institution.

The development of health institutions in the 20th century in Perak clearly shows that the British were determined to achieve their colonialism's mission and maintained its political and economics presence in Perak. It is perceived "the introduction of health institutions including Modern Western medicine as the imperialist 'tool of repression', in line with the efforts of social colonialism to control disease along with its importance on the colonials economic dominance" (Brown, 2004, p. 309; Headrick, 1979, p. 247). The establishment of functional health institution which is a part of the social colonialism's goal had enabled the British to leverage on the facilities rendered to secure a supply of foreign labour while the indigenous people also reaps benefits from the establishment of health institution. This view explains that the introduction of infrastructure facilities such as hospitals serves as a tool for British colonialism to exploit the economic resources and political interest of the indigenous peoples in Malay state within the period of study.

2. Problem Statement

The studies of British Imperialism leveraging on the development of health institutions and hospitals to strengthen their political presence and economic exploitation in Perak between 1911 and 1939 was scarce. From the literature review on previous studies conducted by Chew (1992), Noor (1999), Jap (2007), and Adnan (2005), a research gap emerged and requires the need to highlight the issue of the

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British's health imperialism on health institutions and hospitals in Perak between 1911 and 1939. Hassan and Raja (2013) only highlighted the role of the establishment of health institutions during the British administration in a positive way, as an affirmative action taken by the British in fulfilling the 'white man's burden' mission by providing healthcare to the local community. Recent researches including Manderson (1996), Harun (1988), Chee (1982), Falconer (2015), Maslan (2011) had touch specifically on the relevance of British colonialism in developing health and hospital institutions in the Malay States. However, they lacked emphasis on the underlying intentions of the British to introduce health institutions exclusively on the state of Perak within the period of study. Therefore, this study emphasizes British imperialism in the development of health institutions and hospitals to strengthen its political presence and economic exploitation in the state of Perak during the period of study.

3. Research Questions

While reviewing for this study, two essential issues emerged which formed the basis of the following questions:

1. What are the underlying intentions of this British in restoring the health administration and the operations of health institution and hospitals in Perak between 1911 and 1939?
2. How does the establishment of health institutions and hospitals relate to British imperialism and their influences on the economic and political policies implemented in Perak?
3. These questions will be answered through this study by critically discussing the characteristics, functions, and practices of the health institutions during the British administration in Perak between 1911 and 1939.

4. Purpose of the Study

The main objectives of this study are:

4.1. To examine the function of health institutions and hospitals introduced under the British administration in Perak between 1911 and 1939

4.2. To study and analyse the extent of the British health institutions and hospitals in Perak being leveraged by the British to exploit the economy and shows political presence in Perak administration between 1911 and 1939.

5. Research Methods

In the process of research and writing to examine the purpose of British colonial in establishing health institutions and hospitals during the period of study, qualitative and quantitative approaches were used along with descriptive analysis framework. The data collected were from primary sources such as the Annual Report of the Federated Malay States, Perak State Government Gazette report, and other documents related to the study retrieved from the National Archives in Kuala Lumpur. The secondary sources includes The Straits Times, The Free Press Singapore, and the Mercantile Advertise, and the Malaya Tribune; books, dissertation and theses retrieved from Hamzah Sendut I Library, Universiti Sains

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Malaysia; and resources from websites which includes government records, electronic books, journals, scientific writing references, and dissertations.

The sources retrieved from the National Archives in Kuala Lumpur formed the qualitative and quantitative content for this study as explained in the following.

1.Qualitative content - sources provides evidences of health institutions and strengthen the study of British colonialism through the introduction of hospitals in Perak.

2.Quantitative content - data and information from primary and secondary sources entailing total disease outbreaks and hospitalized patients formed the quantitative narratives.

6. Findings

6.1. British administration and health institution in Perak

Following the formation of the Federation of Malay States (FMS) in the late 19th century, it heralds in the expansion of a new phase of British colonialism through Perak's health institutions. However, the culmination of the British colonialism through the health institutions and hospitals was evident after the restructuring of health and medical administration in 1911. By 1911, British colonialism's pattern of providing and developing health institutions extended beyond sustaining the medical care for the British and European communities but it also acts as a mediator to control the socio-political development of the peoples in Perak (including local and foreign labourers). Researchers such as Manderson and Hairuddin had discussed the effects of health colonialism in connection with the metamorphosis of the British healthcare regime in its colonies since 1911 to post First World War. Despite the First World War that occurred during the period of studies does not involve the British in Malaya; however, the war indefinitely effected the British capabilities to provide financial supports.

McDowell, who was “the first Principal Medical Officer of the FMS had coordinated the health administration in Perak in 1911; he is amongst the key individuals in the formulating and reconstructing the administration of FMS, McDowell and the residents of FMS proposed that the FMS's health administration to be coordinated and centralised under the Kuala Lumpur-based administration in discussion held circa March 1910” (Hassan & Raja, 2013, p. 8). The decision to centralised the management of health institution was contributed by McDowell basis of argument which stated that “there are inconsistencies in the management in each FMS’s health institutions and mismanagement on sanitary-related matters” (Hassan & Raja, 2013, p.19). The coordination of health administration occurred due to the outbreak of epidemics diseases, especially malaria. Malaria had infected most of the workers, local communities, and the British colonies in FMS, especially those residing in Perak. The health status of the locals, workers, and British officials was “the main concern of the health administration as the spread of malaria was rampant from year to year and was reported to spread across a large portion of the urban areas and economic center” (Colonial Office 438, 1987, Administration Report of Perak in 1909, p.19). The table 1 below shows the growing number of malaria patients that received medical treatment at a hospital between 1907 and 1911.

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Table 01. Number of malaria patients who had received medical treatment at a hospital between 1907 and 1911 (Colonial Office 438, 1987, Administration Report of Perak 1907-1911]

Year	Number of treated patient	Number of death patient
1907	7063	392
1908	7310	474
1909	7404	426
1910	7241	444
1911	10624	621

The centralization and coordination of FMS health administration and the appointment of a new medical officer pushed through as an effort to standardise health administration across all FMS in 1911. The British also set up a government advisory board which discussed health-related matters, particularly the issue of epidemic outbreaks in the FMS states (Kaudon et al., 2013, p. 187). However, the British prioritise their interest which is to control the economic resources and maintained political presence in Perak. The coordination of the health administration in FMS, mainly in Perak, was standardized; and the introduction of an annual census system of the population recorded the information of foreign labourers and locals on an easy-to-access patient database.

According to Hassan and Raja (2013), "… the close cooperation between the resident and the Principal Medical Officer is the only effective means in realizing the establishment of the health department and making it an important instrument to monitor the population's health" (p. 20). The administration of health institutions and hospitals introduced by the British during this period had transformed the roles and functions of leaders, police, and village leaders from monitoring the health of local communities and workers (Chai, 1967) to acting as informants to the British by providing information on the public's responses to health and the overall British administration in Perak.

6.2. British colonialism and health institutions

The phase of British colonialism in Perak from 1911 to the mid-20th century saw a shift in the pattern of health-care services to the foreign labourers and locals and its control over infectious disease. The increasing demand in the world rubber market between 1911 and after the outbreak of World War II increased the demands of rubber and tin ore which prompted the British to increase the productivities of both raw materials by optimizing the labourers supply (Harun, 2017). During the First World War, the British in Malaya were indirectly involved in financing the costs of British wars abroad, which had incurred high expenses (Haron, 1996). However, the increasing malaria cases since 1910 had effected British administration and economic stability. In 1911, malaria cases increased drastically and disrupt the livelihood of the populations in affected areas (Harun, 2017). The issue occurred due to the municipal process and the condition of the drainage and sewerage system at the coolies' lines (Manderson, 1996). Therefore, coordination of the FMS health administration was implemented by the British in order to control the spread of infectious diseases effectively and to enhance the operation of Perak health institutions. This direct coordination of health administration has provided an opportunity for local communities to seek services at health institutions. However, the new British health administration in Perak extended their duty of controlling the spread of infectious diseases to handling the indigenous dissatisfaction with the epidemic which continued till 1918.

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By the 1930s, the FMS administration had undergone a decentralization process that directly restored the administrative powers to the respective FMS (including Perak) administration. The decentralization occurred due to the process of standardizing the administration of the Malay states and the recession that hits the Malaya which effected financial stability (Colonial Office 438, 1987, Federated Malay State Record, 1933, p. 2) The functioned of medical administration during the centralization process, however, "remained under the management of the individual state" (Harun, 1988, p. 102). During the 1930s, the hospital operated as an instrument to meet the needs of the British and foreign communities living in urban areas such as Taiping, Kinta, Ipoh, Batu Gajah, Teluk Anson, and Kampar. The provisions of outpatient dispensaries were not uniformed and were primarily designed for the workers to facilitate their access to hospital services. The dominance of traditional medical practitioner offering medical services within the Malay communities in Perak worries the British for it could potentially threaten the expansion of Western medicals in Perak which subsequently led to the British intention to limit the patronage of traditional medical practitioner. The introduction of rural health institutions for the benefit of indigenous peoples is also incidental. In the 1930s, the provisions of outpatient services for rural dwellers convenience were limited; while the number of midwives and dressers on duty were reduced due to mobility and accessibilities issues (*The Straits Times*, 1935). The available health care facilities and services were provided only for people who could afford the cost which was common for those who served under the British bureaucracy. The services provide by hospitals varies and some were incompatible with the respective establishments; it also imposed high rates on the patients that seeks for health services (*The Singapore Free Press and Mercantile Adviser*, 26 August, 1935).

In comparison, the health services provided by the British in general hospital namely district and estate hospital, the operations of these hospitals were on a flat rate basis; meanwhile the 'first class' hospital and wards services were offered particularly for European which might have an exclusive rate. Most of "the Perak Malay peoples who have excellent health services in the hospital were only the elites and workers who served under the British administration" (Manderson, 1996, p. 143), while the others was being the most marginalized and minority group. Every provisions and equipment of hospital estates for the convenience of labourers were also limited and halted by the British as to resolved the problem of annual spending during the recession (Colonial Office 438, 1987, Federated Malay States Annual Report of Perak 1931, p. 42)

According to the 1933 Annual Report of the Allied Malay States of Perak, "the total number of permanent estate hospitals in the whole of Perak was only 44 hospitals" (Colonial Office 438, 1987, Federated Malay States Annual Report of Perak 1931, p. 6). The estate hospital was replaced with a new group of hospital introduced by the Board of Health to cater to the workers; however it oppressed workers further as workers were paid lower wages by their employers to cover the hospital service charges specifically for workers which charged twice as much to the labour employer. According to the *Malaya Tribune* newspaper (June 6, 1931), "the Board of Health in a joint meeting with the deputy president of the FMS Health Department, Dr. C.J. Wilson had discussed the grievances of the labour employers regarding their dissatisfaction with the high charges imposed on them" (p. 13).

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In 1937, the permanent estate hospital consisted of only 42 hospitals. The measures were taken by the British to alleviate the financial crisis of the recession only to ensure the British and their communities spending in Perak. The *Singapore Free Press and Mercantile Adviser* dated on 13 April 1937 posted

> a statement by the High Commissioner, Shenton Thomas, on proposals for the improvement of facilities and equipment of health institutions in Ipoh. In the statement, he proposed the provision of additional European wards that could accommodate at least 600 to 1000 people per hospital, along with air conditioning equipment for each first-class ward. (p. 9)

6.3. British Imperialism and control of health care services

The culmination of the British colonialism in Perak in the 20th century witnessed alteration in the operation of health institutions extended beyond providing the need of health services to sustain the British administration and foreign communities that lived in Perak to monitor the political sphere in Perak. In this phase, the introduction of all health services to the workers and local communities, such as quarantine measures and vaccination were also well said to be 'two-pronged' with “the aim of controlling the working conditions of the estates and the mines while blocking the political development of the Malay community” (Maslan, 2011, p. 92). “The British also indirectly control the chief system, police and village chiefs by assigning them to monitor the local communities' health in order to get their response towards modern medicine” (Chai, 1967, pp. 59-60) and through it retrieved intelligence on their political inclination indirectly which could potentially threaten the British administration in Perak).

In the 1920s, the disease control regulation through the implementation of the quarantine was intensified in line with British efforts to conduct a 'census' through health visits to locals in order to control anti-colonial activities in Perak, especially with the growing influence of religious and leftist movements in Perak. Through the records of patients and the records of every household for health purposes, “the British does not only gained intelligence on the locals' response to modern medicine” (Rahman et al., 2012, p. 374) but at the same time, they were informed about the locals' background and their involvement in political activities. As stated by Maslan (2009), the British also appointed health officials among Malays to report the progress of local pilgrims during the pilgrimage in order to prevent the growth of "pan-Islamism" which influenced them. Even in the 1920s until the late 1930s, the British with the assistance of several officers and staff under the district administration including local administrators such as chiefs, police officers and post workers had intensified their surveillance on the local community, especially in the villages while providing health services and modern medicine to them. (1957/0593158, Smallpox in Perak, 1922, 19; MEDICAL 476/41, Proposed Amendments to the Quarantine and Prevention of Disease Enactment 1923, 1923, p. 3; Federated Malay State Record, 1933, p. 21). According to Hassan and Raja (2013),

> As with any dispensary service, the success of infant care services in the villages lies in the persistence shown by the baby welfare center staff, district officials, chiefs and even the police; the British also used the role of Penghulu /village chiefs, school teacher and police as the most effective medium to bring the Malays closer to the Western medical methods they introduced. (pp. 374-375)

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Even in the 1920s until the late 1930s', "the Protectorate Chinese that was set up by the British as an exclusive association also play an essential role in controlling the Chinese labors' situation in which indirectly facilitated the British into realising their interests in the mining sector" (Harun, 2017, p. 117). The association also acts as an intermediary for the Board of Health in terms of monitoring the labor movement, especially in curbing communist influence in the mine (Harun, 2017). Initially, the function of the association was to reduce labour pressure in the mines through health care by associations represented by their respective ethnic group. On the other hand, the introduction of the disease control regulation has created repression and restraint of labourers whose health conditions are often left unmanaged and neglected (Manderson, 1996). The association obliged itself to the disease control regulation which was the intention of the British to reduce their cost of health care and eliminating the less skilled labour in the mining industry. This situation extended to the end of the first phase of British administration in Perak.

7. Conclusion

Based on the above discussion, it is evident that the changes in the policy and operation of health administration in Perak began in 1911 under a centralized health administration in Kuala Lumpur does not only meet the needs of health services for the continuation of British and European administration but also enable them to control the administrative structure and economic resources of Perak. The situation is stark contrary to social responsibility as agreed through discussions between major powers like the Netherlands and France in the Bandung Conference in the 1930s in respect of the principles of social responsibility that should be implemented by the major powers on the issue of health problems in the East. The British have no intention to fulfil the mission of 'White's man burden' in order to protect the health of the local community. As a whole, this study concludes that the development of health institutions and hospitals under the British administration in Perak between 1911 and 1939 aligned with British imperialism or better known as 'social colonialism.' Without health institutions and hospitals, epidemics diseases could spread rampantly and disrupt the health status of foreign workers located at the heart of colonial exploitation in Perak which threatened the safety of British administrators involved in process of colonialism.

The difficulties encountered while conducting this study was in terms of obtaining information on the local community's reaction to British colonialism through existing writings, especially in obtaining documents relating to locals of Perak's response to the health institutions. There are limitations in terms of getting a referral source in the form of "*Akhbar Melayu Perak*," which featured direct reactions of the local communities on the health institutions and modern medicines in Perak. Therefore, this study serves as a reference for future researchers to further develop and address research gap on the impact of British colonialism in transforming and developing health institutions and hospitals in Perak during Post World War II British re-administration of Malaya. The findings of this study intend to provide a new perspective on the history of health in Perak by highlighting the form of "social colonialism" that existed through the introduction of health institutions and hospitals during period of study.

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eISSN: 2357-1330

Acknowledgments

A special thanks to Dr Azmi bin Arifin, a Senior Lecturer of History Department, School of Humanities, USM for being a great supervisor. His contribution to the ideas and guidance in preparing the articles and paperwork is much appreciated.

References

Adnan, M. M. (2005). *Sejarah Perkembangan Penyakit di Perak antara tahun 1900 sehingga tahun 1920* [The history of Disease in Perak between 1900 and 1920] [Academic exercise]. Kuala Lumpur, Universiti of Malaya.

Brown, S. H. (2004). A Tool of Empire: The British Medical Establishment in Lagos, 1861-1905. *The International Journal of African Historical Studies, 37*(2), 309-43. https://doi.org/10.2307/4129011

Chai, H. C. (1967). *The Development of British Malaya 1896-1909.* Oxford University Press.

Chee, H. L. (1982). Health Status and the Development of Health in Colonial State: The Case of British Malaya. *International Journal of Health Service, 12*(3), 397-417. https://doi.org/10.2190/W0NN-2NQE-6GWC-MMUC

Chew, L. T. (1992). *Sejarah Perkhidmatan Perubatan & Kesihatan di Perak 1880-1939* [The History of Medical & Health Services in Perak 1880-1939] [Academic exercise] Selangor, Universiti kebangsaan Malaysia.

Colonial Office 438. (1987). Annual Report on the Social and Economic Progress of the people of Perak 1918-1939 (microfilm 1488). Pulau Pinang: University of Science Malaysia.

Falconer, D. (2015). British Implementation of Western in Malaysia and the Malaysian Reaction. *The Forum Journal of History, 7*, 45-47.

Federated Malay State Record. (1933). Federated Malay States Annual Report of the Medical Department 1933.

Haron, N. (1996). Malaya dan Sistem Pertahanan Imperial British sebelum dan Selepas Perang Dunia Kedua [Malaya and the British Imperial Defense System before and after World War II].' *Jebat: Malaysian Journal of History, Politics and Strategic Studies, 24*, 124-136.

Harun, H. (1988). *Medicine and Imperialism: a History of the British Colonial Medicine, Health policy and medical research in the Malay Peninsula, 1786-1918*. University of London.

Harun, H. (2017). *A History of Colonial Health Policy in Malaya, 1784-1918, Volume 2.* (Google e-book).

Hassan, N. M., & Raja, S. S. (2013). Perkembangan Jabatan Perubatan Persekutuan, 1896-1910 [The development of the Federal Medical Department, 1896-1910]. *Journal of Department History, 21*(1), 1-40. https://doi.org/10.22452/sejarah.vol21no1.1

Headrick, D. R. (1979). The Tools of Imperialism: Technology and the Expansion of European Colonial Empires in the Nineteenth Century. *The Journal of Modern History, 51*(2), 231- 263.

Health Board Complaints: Breakdown of hospital system? Estates bearing double cost? (1931, June 6). *Malaya Tribune*. https://eresources.nlb.gov.sg/newspapers/Digitised/Article/Maltribune19310606 1.2.120?ST=1&AT=search&k=Health%20Board%20Complaints:%20Breakdown%20of%20hspital%20system?%20Estates%20bearing%20double%20cost?&QT=health,board,complaints,breakdown,of,hospital,estates,bearing,double&oref=article

Jap, H. S. (2007). *Perkhidmatan Perubatan di Perak, 1878-1941* [Medical Services in Perak, 1878-1941] [Unpublished master's thesis]. Kuala Lumpur: Universiti of Malaya

Kaudon, E., Chew, L. T., Darus, H. H., & Salleh, B. (Eds.). (2013). *Antara dasar dan kesan:hubungan ekonomi, penduduk dan penyakit di Tanah Melayu di bawah pentadbiran British* [Between the Policy and its effect: The relation of the economic, population and disease in Malaya under the British administration]. Malaysian Branch of the Royal Asiatic Society.

Manderson, L. (1996). *Sickness and the State: Health and Illness in Colonial Malaya, 1870 1940.* Cambridge University Press.

Maslan, A. (2009). *Dari Tabung Buluh ke Tabung Haji: Sejarah Pengerjaan haji orang Melayu, 1850-1984* [From Bamboo tube to Tabung Haji: The history of Malays pilgrimage, 1850-1984] [Unpublished Doctoral Dissertation]. Pulau Pinang, Universiti Sains Malaysia.

Maslan, A. (2011). Sistem kuarantin dan pelaksanaannya di Tanah Melayu pada sekitar abad ke-19 [The quarantine system and its implementation in Malaya in around 19th century]. *Jurnal Sejarah, 1*, 79-103.

Medical Report, 476/41. (1923). Proposed Amendments to the quarantine and prevention of diseases Enactment 1923.

Noor, K. M. (1999). *Perkembangan kesihatan di Perak 1896-1914* [The development of health in Perak 1896-1914] [Academic exercise]. Kuala Lumpur, Universiti

Rahman, Z. A., Noor, A. M., & dan Rus, A. K. A. M. (2012). *Dastar Pendeta: Kumpulan Esei Sempena Persaraan Profesor Dr. Abdullah Zakaria Ghazali* [Dastar Pendeta: An Essay Group in conjunction with the retirement of Professor Dr. Abdullah Zakaria Ghazali]. Jabatan Sejarah Universiti of Malaya.

Sec/Selangor. (1922). Smallpox in Perak 1922.

The Singapore Free Press and Mercantile Adviser. (1935, August 26). Hospital Charges Reduced in Perak: Relief for poor Asiatic. *The Singapore Free Press and Mercantile Adviser*. https://eresources.nlb.gov.sg/newspapers/Digitised/Article/singfreepressb193508261.2.40?ST=1&AT=search&k=Hospital%20Charges%20Reduced%20in%20Perak:%20Relief%20for%20poor%20Asiatic&QT=hospital,charges,reduced,in,perak,relief,for,poor,asiatic&oref=article

The Singapore Free Press and Mercantile Adviser. (1937, April 13). Ipoh to have a large new Hospital approed by Sir Shenton Thomas: Acommodation to be provided for 1,000 patients, air conditioning in some wards. *The Singapore Free Press and Mercantile Adviser.* https://eresources.nlb.gov.sg/newspapers/Digitised/Article/singfreepressb193704131.2.62?ST=1&AT=search&k=Ipoh%20to%20have%20a%20large%20new%20Hospital&QT=ipoh,to,have,a,large,new,hospital&oref=article

The Straits Times. (1935, January 31). Federated Malay States Unofficials and Decentralisation: Mr Shearn's Plea in Federal Council. *The Straits Times*. https://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes193501311.2.134?ST=1&AT=search&k=The%20Straits%20Times%2031%20January%201935&QT=the,straits,times,31,january,1935&oref=article