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Pandemics and Epidemics in Algeria During the Colonial Period 1830-1962 Mainly Through the French Sources: Bibliographic Research

Abstract

By reading a doctoral dissertation tagged with “The history of medicine in Algeria under the French colonialism 1830-1962” presented by the student Mejahed Yamina and under the supervision of doctor Feghrour Dehou from Oran University during the university years 2017-2018. The momentum which distinguished the bibliography of this thesis caught my attention, especially with regard to the French sources. So I decided I'd deal with these sources by translating their titles and doing a statistical study which makes it easy for us to classify these diseases and their nature and even the nature of their authors.

The research presents the most prominent statistics related to the quality of epidemics and the nature of the documents used, through which we reached the results that show the importance of the bibliographic study in clarifying the features of academic studies that make it easier for the researcher to know the scientific value of the university dissertation.

Keywords: *diseases, The south west, bibliometric, colonialism, medicine*

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Vəba və epidemiyalar Əlcəzairdə müstəmləkə dövründə 1830–1962-ci illərdə əsasən Fransız mənbələri vasitəsilə: bibliografik tədqiqat

Xülasə

Mən, tələbə Məcahid Yəminə tərəfindən təqdim edilmiş və 2017–2018-ci tədris ilində Oran Universitetindən doktor Fəğrur Dehu nəzarəti altında hazırlanmış "Fransız müstəmləkəçiliyi dövründə Əlcəzairdə tibb tarixi 1830–1962" adlı doktorluq dissertasiyasını oxuyaraq, bu dissertasiyanın bibliografiyasına, xüsusən də Fransız mənbələrinə diqqət yetirdim. Buna görə də bu mənbələrin adlarını tərcümə etməklə və onların xəstəliklərini, təbiətini və hətta müəlliflərinin təbiətini təsnif etməyi asanlaşdıran statistik tədqiqat aparmaq qərarına gəldim.

Tədqiqat, epidemiyaların keyfiyyəti və istifadə olunan sənədlərin təbiəti ilə bağlı ən görkəmli statistik məlumatları təqdim edir və bu yolla bibliografik tədqiqatın tədqiqatçıya universitet dissertasiyasının elmi dəyərini bilməsini asanlaşdıran akademik tədqiqatların xüsusiyyətlərini aydınlaşdırmaqda əhəmiyyətini göstərən nəticələrə gəldik.

Açar sözlər: xəstəliklər, Cənub-qərb, bibliometric, müstəmləkəçilik, tibb

Introduction

The scientific sources are an important knowledge wealth in conducting university researches in their various degrees, often overlooked by researchers, and in order to show their scientific treasure, I decided to make a search in the different Master's and doctoral theses to investigate these sources and explore their depths and know their truth so that they can be within the reach of researchers in all their ranks.

Some university theses which deal with medicine, Sahara and water drew my attention. So I chose medicine through a doctoral thesis presented by the student Mejahed Yamina and under the supervision of doctor Feghrour Dahou in Oran university, during the academic year 2017-2018, and it was labelled <<The history of medicine in Algeria under French colonialism 1830-1962>>.

Algeria went through various pandemics and epidemics during the colonial period, which reflected negatively on the Algerians, and the south west region was not spared by this phenomenon. What is eye-catching is that these epidemics and pandemics sometimes came naturally. Often Man had a hand in that. And here I quote the effects of colonialism in destroying the health system of the Algerians in various ways and forms.

There were various diseases depending on the environment and how humans interacted with these diseases. Among them we quote plague, swamp fever, smallpox, typhus.

To know these epidemics, we shed light on some French writings so that we can explore the depth of the social reality reached by the French themselves.

Research

The French travellers worked to detect these diseases and find traditional and modern methods of treatment which were prevalent. What they wrote was just the tip of the iceberg. So we will try to shed light on these epidemics through their reports and understand their causes and implications through a bibliometric study (statistical). This will allow us to know the types of diseases, where they are spread and the most widespread epidemics relying on the French archives and what the French themselves wrote. What I present are brief examples of a large group of sources of various types.

The article raises the issue of statistical study through which we can diagnose the nature of the diseases and the epidemics and the areas where they are spread. Thus, what is the expected benefit from studying these sources? And what is the point from the bibliometric study? And how can we use this study to diagnose the truth of the scientific researches?

One of the assumptions that impose themselves is highlighting the importance of the scientific sources in the accomplishment of university researches as well as realising the value of the bibliometric study which we rarely talk about due to its importance in measuring how responsive is the research to the sources used.

1. Presentation of the French sources:

1.1. Archive circles:

1.1.1. the archives of the chamber of commerce in Marseille(A.CH.C.M)

- Captain Lazaret's correspondence to Marseille about seizing the Algerian pilgrims.
- The plague in Algeria.

1.1.2. The regional archive of the prefecture of Rhone Estuary in Marseille (A.D.B.R)

- A letter dated on March 1st, 1818, plague pandemic.
- The consul Duval's letter ON May 18th, 1818 about the severe plague (the black plague) and a letter dated on November 1st, 1818 about stopping the plague in the capital. The consul Duval's letter on December 2: the plague in Oran and Arzew.
 - The Duval consul's letter on September 19th, 1819: plague devastation.
 - The Duval consul's letter on January 20th, 1822: public health good in the kingdom. Letter May 29th, 1822 about the plague epidemic in Algiers and its outskirts.
 - Mandatory quarantine, easing the quarantine.
 - Health council on November 30th, 1831: cholera disease.

– Cholera disease in Marsa elkebir (grand port), Mostaganem and Mascara, Letters dated in November 1834.

- Letter dated in December 1834: cholera in the west.
- Letter dated on March 2nd: public health in Annaba and Oran and their neighbourhood.
- Health precautions against the cholera disease.
- Quarantine imposed on the ships coming from the capital.
- The Asian cholera disease in Tlemcen.
- Letter dated on: cholera in Oran.
- Letter dated on September 24th, 1867: cholera return.
- Yellow fever in Algeria (1858-1870).
- Infectious diseases (1797-1848).

1.1.3. The French national archive overseas (AIX-En-Provence)

- Occupation doctors(1854-1858)
- Pilgrimage(1842-1858)
- Reorganisation the public health services and reforming the free medical assistance and supplying red cross mobile health teams in Algeria(1851-1861)
- Fighting epidemics and serious diseases (1944-1960)
- Fighting swamp fever in Algeria (1947-1959).
- Fighting the chest diseases (1945-1962).
- General health organisation:

*Vaccination

*Anti-smallpox vaccination, the population reluctance (abstention) November 5th, 1948.

*Report on compulsory vaccination against smallpox on April 24th, 1951.

Extract from (Aljournhourri Newspaper) November 29th, 1951 N 2601: measles killed three children in Larbaa Nathirathen (fort national in the French era).

1.1.4. Archives of the Algerian national archives centre in Bir Khadem (C.A.N.A)

- The patient movement in hospitals, the capital and its outskirts 1956.
- Disease control and prevention (1939-1960).Fighting mosquito: Constantine 1933.
- Medical statistics (1930-1961) epidemiological investigation, Pasteur Institute, Algiers.
- Medical statistics (1930-1961) epidemiological researches of the infectious diseases.
- Presentation on the epidemiological situation in Algeria: typhus, typhoid, smallpox
- General information about the important epidemic events between November 1945 to April 1946.

1.2. The sources(books):

- AGNELY (dr. H): locust swarm and its spread in Algeria (1816,1845,1866).
- AMEDEE (morin): typhus of the Arabs (skin effects), epidemics 1868.
- ANONYM: famine in Algeria and the official letters, errors and contradictions.
- ARMAND (adolphe): global climate agreement, medical study on the climate.
- BERTHERAND (A): cholera in Algeria, import of infectious cholera.
- BERTHERAND Emile Louis: the sources which the Arab medical material can supply to the French and Algerian pharmacies.
- BERTHERAND (E.L.): cholera in Algeria, the years (1849.1950.1951).
- BERTHERAND (E.L.): the Arab; edicine and hygiene.
- GARDON (victor): report on the observed typhus epidemy.
- GEMY et RAYNAUD: study obn leprosy in Algeria, especially in the capital.
- MONTPRELLIER (j): The problem of leprosy in Algeria.
- PIPPER (Edouard L.F.P): Malaria, contribution in studying the inflammatory diseases.
- TEMSAL (Jean-Joseph-Marine): a century of the French colonialism medicine (1830-1929).
- SABATIER (Camille): malaria in Algeria: causes and prevention.
- VINCENT (M.A.): cholera through nine epidemics known by Algiers (1835-1865).

1.3. References:

- A.Berbrugger: note on the plague in Algeria through scientific exploration of Algeria.

- A.BERTHERAND: cholera in Algeria (1849-1850-1851).
- AGNELY (Dr): Algeria, general vaccination during exercise 1849.
- ARMAND. (Adolphe): medical Algeria, topography of climatology and colonialism.
- Augustin Bernard: investigation into the agricultural housing of the natives.
- Sergent Edmond, et autres:vaccination against tuberculosis in Algeria through b.c.g.(1932-1933).
- Sergent Edmond: a note on history during a year of accumulation
- Gemy: a study on smallpox prevention.
- J.C CRESPIAN: Typhoid fever in hot countries
- J.L.G. Guyan: chronological history of epidemics in North Africa.
- Jules Perier: the effects of misery and plague in Algeria (1868).
- Raynaud. L: plague in Algeria.
- Levi Valensin (A): tuberculosis in Algeria and its fate.
- Vincent Martin and others: cholera according to the nine epidemics prevalent in Algiers, the capital since (1835-1865).
- Raynaud, Lucien: plague epidemics in the prefecture of Algiers: a plague case because of the occupation (1899-1924).

1.4. Dissertations:

- (George) Armani: smallpox and vaccination. contribution to the study of the problem in Algeria. A thesis discussed on January 10th, 1927.
- Colin, Gabriel: Abdu Razzak Aljazaery: an Arab doctor in the second Hijri century, medical thesis in Montpellier 1905.
- PONZAK (Daniel): plague in the Ottoman Empire (1700-1850). PhD thesis: Sorbonne Paris University.
- Vincent (J.B): The Algerian doctors during the invasion. Thesis discussion on May14th, 1914, Algiers.

1.5. Periodicals:

- A, Bel: the saints and the cultural beliefs, the African journal, n* 1928,69.
- Anonym: notes on various cases of poisoning in Algeria because of poisonous fruits.
- Arnould (Jules):African dermatology
- Bois (Charles): famine and drought in Algeria (1950-1951).
- Furnari(S): Researches on ophthalmology in Algeria, August, 1860.
- G. Blanc, and M. Baltazard: experimental researches on plague, inflammation because of human insect.
- Guilliermin (M): sources and spread of plague(1847).
- Guyan(M):Plague in Algeria(1817-1818).February 1st,1834.
- Mafat(b), Brisou (P), Bertherat (E): Epidemiology, taking care of plague diseases in the mediterranean sea during the second world war.
- Perier: the effects and misery of the plague in Algeria (1868).
- Pouget (Marcel): a prevalent enemy, the swamp mosquito.
- Raynaud (Lucien): exanthematous plague in Algeria (1927).
- Zixarde(D.M): a note about some diseases, the Arabs and medical applications among them(1837).

2. Bibliometric study:

2.1. the concept of bibliometrics:

The bibliometric study is a science doing research in general or specialized intellectual production, which deals with a specific topic where mathematical and statistical methods are often applied.

Bibliometrics uses statistical and mathematical methods in data analysis which are related to documents to know the characteristics of information trading operations, and one of its aims is identifying the shortcoming in the bibliographic services, and thus measuring it. On this basis, we can say that the use of this science in the university theses for example gives us an accurate picture

of how far the researcher did well in employing bibliographics on a specific topic. For example, if the topic is about medicine and the percentage of reliable sources doesn't exceed 30%, we can say that the topic has not achieved its goal through the proposed topic (Timour & Abdou alilah, 2019, p. 120).

We will try to apply this study on the approved bibliography in Phd thesis above mentioned.

What drew my attention the momentum which characterized the thesis bibliography especially what regards the French sources. So I decided to deal with these sources by translating their titles and assess a statistical study which makes it easy for us to make these sources classify the diseases and their nature.

The number of sources from the archive and other sources (books), as well as references, periodicals and university theses reached 79. It is a selective number which didn't concern all the bibliography. We have reached the following results:

- The archive: 31 sources.
- The sources: 16 sources.
- The references: 15 references.
- The university theses: 04 theses.
- The periodicals: 13 periodicals.

Through studying the percentage of each part in the work as a whole, we find the following:

- The archive represents 39,24 % or $(\frac{31}{79})$
- The sources represent 20,25% or $(\frac{16}{79})$.
- The references represent 18,98 % or $(\frac{04}{79})$.
- The university theses represent 05,06 % or $(\frac{13}{79})$.
- The periodicals represent 16,45% or $(\frac{13}{79})$.

2.2. The diseases cited in the bibliography:

The following diseases were mentioned: plague (16), cholera (12), swampfever (05), smallpox (04), typhus (04), tuberculosis (02), leprosy (02), typhoid (02), yellow fever (01).

Among the 79 documents which discusses the field of health in its different fields, several documents discussed the epidemics. We recorded nine epidemics, and thus we came to these results:

- Plague represents 20,25% or $(\frac{16}{79})$.
- Cholera represents 15,18% or $(\frac{12}{79})$.
- Swamp fever represents 06,32% or $(\frac{05}{79})$.
- Smallpox represents 05,06% or $(\frac{04}{79})$.
- Typhus represents 05,06% or $(\frac{04}{79})$.
- Tuberculosis represents 02,53 or $(\frac{02}{79})$.
- Leprosy represents 02,53% or $(\frac{02}{79})$.
- Typhoid represents 02,53% or $(\frac{02}{79})$.
- Yellow fever represents 01,26% or $(\frac{01}{79})$.

We conclude from the percentages that the epidemics of plague and cholera are the most common as they are associated with the health and nutritional environment.

2.3. Definition of the above mentioned diseases:

The plague: it is an infectious disease, it is caused by the bacterium Parvovirus, some doctors attributed its cause to pollution, air poisoning due to the bad smell of rotting dead locust bodies which is emitted when locusts overrun the country. p Plague has several types of which: bacterial plague, animal plague, pneumonic plague (Alama, 2015, p. 209).

Cholera: it is an acute infection causing diarrhea. It results from eating contaminated food or drinking contaminated water with cholera bacteria. Cholera is still posing a world threat to public health and an indicator of inequality and lack of social development (Bertherand, 1855, p. 428).

Smallpox: it is a highly contagious disease due to fever (virus). It appears as red spots on the skin then they turn to very hard vesicles. When not treated, the suppurate leaving scars on the face as if they were engraved. This could cause disabilities such as blindness and deafness and even death (Bertherand, 1855, p. 434).

Typhus: this disease results from social circumstances rather than natural ones, misery and poverty resulting from wars and natural calamities such as drought and floodings as well as the spread of locusts, hunger, malnutrition and lack of hygiene with the lack of health protection (Alama, 2015, p. 214).

Swamp fever: also called malaria, is an infectious disease caused by Laveran's germ. It is transmitted to man by the anopheles mosquito bite. The person has a fever accompanied by anaemia because it affects the red blood cells (Merjani, 2020, p. 308).

Tuberculosis: it is a dangerous and infectious disease. It was always feared by the population, and they don't like to announce those infected with it and for a long time it was considered a shameful disease that shouldn't be talked about. It is widespread in desert areas and we notice it in several forms. One of the factors of its spread is a volatile climate sometimes, which affects the population especially since they are not able to have adequate clothing and suffer from lack of hygiene and alcohol abuse (Anonymous, Tuberculosis, w.d).

Leprosy: a chronic disease that isn't easily transmitted from one person to another and is caused by one of the types of organic bacteria. It usually affects skin, peripheral nerves, the mucous membrane lining the respiratory system as well as the eyes. If not treated, it could lead to an increasing and permanent damage on the skin, nerves, the limbs and the eyes (Bertherand, 1855, p. 424).

Typhoid: typhoid fever is a life-threatening infection caused by Salmonella typhi bacteria and is usually spread through contaminated food and water (Anonymous, Typhoid fever, w.d).

Yellow fever: it is a viral disease transmitted through certain types of mosquito. The yellow fever virus especially destroys the liver and kidney tissues. One of its symptoms is decreased urine output and the liver stops performing its functions as it should. Yellow pigments accumulate in the skin, which changes the skin colour which tends to yellow, hence the name of the disease. It is classified as a neglected tropical disease (Anonymous, yellow fever, w.d).

2.4. The cities affected by the epidemics through bibliographic titles:

Through the titles of bibliography we counted the epidemics, whether related to Algeria as a nation or its cities. Algeria as a nation (27), the capital (09), Oran (03), Arzew (01), Tlemcen (01), Constantine (01), Mersa el Kebir (01), Mostaganem (01), Maascar (01), Larbaa nathirathen (01).

Starting from these data, we get the following percentage which affected Algeria as a nation and affected some cities:

- Algeria as a nation represents 34,17% or $(\frac{27}{79})$.
- Algiers represents 11,39% or $(\frac{09}{79})$.
- Oran represents 03,79% or $(\frac{03}{79})$.

Whereas in Arzew, Tlemcen, Constantine, Annaba, Mersaelkebir, Mostaganem, Maascar and Larbaanathirathen it represents 01,26% each or $(\frac{01}{79})$.

The observation we derive from the numerical data gives us the impression that the study included all Algeria as a whole with a big percentage, with lower rates for major cities like Oran. We say this due to the difficulty in reviewing the content of the sources (the books), maybe they talk in more detail about the other regions of the country.

Back to the rest of the bibliography, other sources and references which talk about epidemics in the desert and the south west drew my attention; among them:

– Casset (Dr.A) : in the south of Oran...memories of a military doctor who talks about various epidemics in the south west similar to typhoid, mainly in Ain Sefra.

- Armieux (Dr): the desert medical topography of Oran region, where the write explains the different epidemics and diseases in the south of Oran but briefly.
- Abdelkader Merjani: the French policy and the role of the explorers in penetrating in southern Algeria during the 19th century. Supervision of professor doctor Mohammed Mjawed, Sidi Belabbes University, 2020, where the student discusses part of the health in the south west in terms of diseases, epidemics and the structures, but no so deeply that it can be relied on.

3. Charts:

We seek to embody these above mentioned percentages to represent them graphically to make it easy for us to note the differences in the epidemics and regions.

Table 1: the table clarifies the nature of the documents used in the search.

Type of document:	percentage
Archive	39,24
Sources	20,25
References	18,98
University theses	05,06
Periodicals	16,45

Figure 1: clarifies the chart of the percentages of the documents

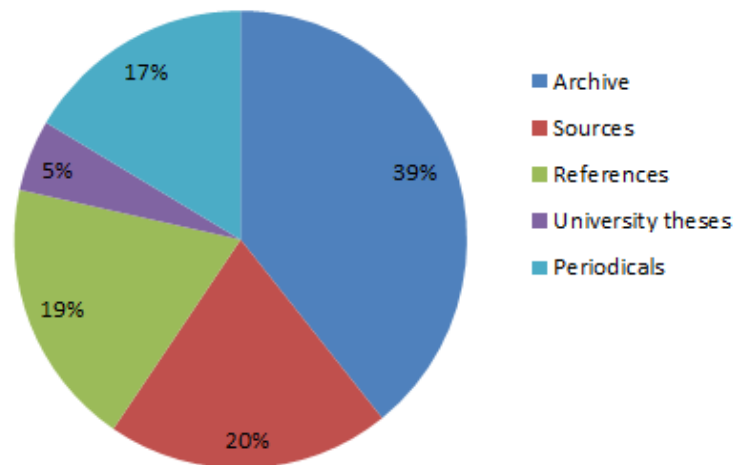


Table2: It clarifies the nature of epidemics and mentions their percentages in the documents

Type of disease	percentage
Plague	20,25
Cholera	15,18
Swamp fever	06,32
Smallpox	05,06
Typhus	05,06
Tuberculosis	02,53
Leprosy	02,53
Typhoid	02,53
Yellow fever	02,26
The rest of the documents	34,22

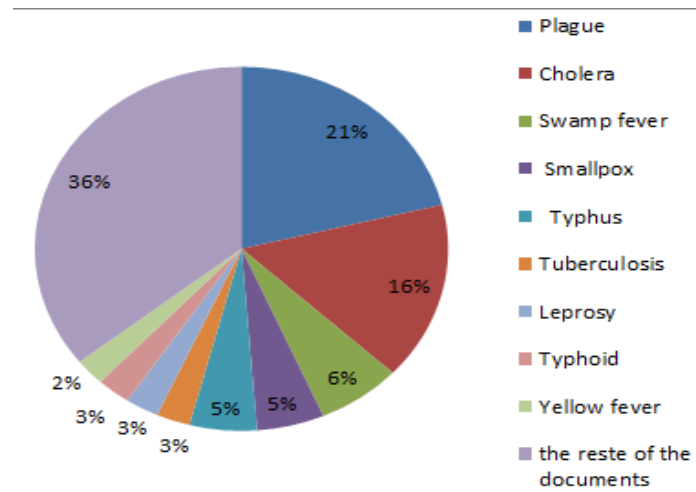


Figure2: it clarifies the chart of the epidemics mentioned

Table3: it clarifies the most frequently mentioned regions in the documents

The region	percentage
Homeland Algeria	34,17
The capital	11,36
Oran	03,79
Arzew	01,26
Tlemcen	01,26
Constantine	01,26
Annaba	01,26
Mersaelkebir	01,26
Maascar	01,26
Mostaganem	01,26
Larbaanathirathen	01,26
The rest	41,86

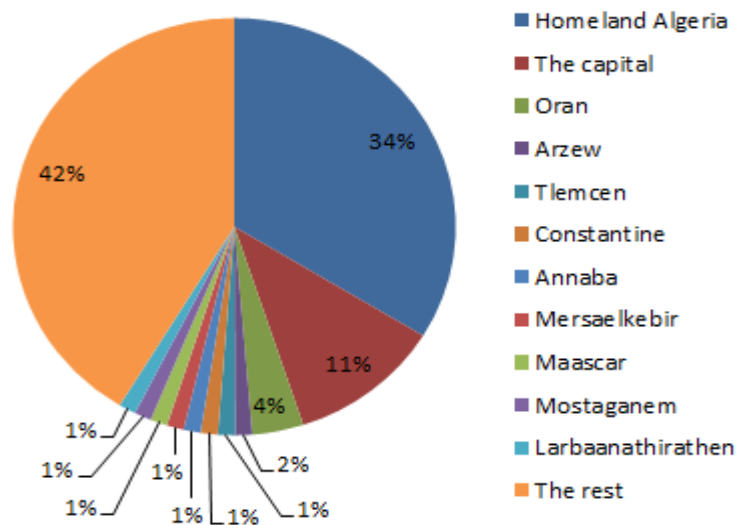


Figure3: it clarifies the chart of the most frequently mentioned regions

Conclusion

Through this study we conclude the following results:

- ✓ Bibliometric study combines the study of bibliography with the scrutiny of its nature, specifically for the value of the search.
- ✓ There are many documents used in the research clarifying the nature of epidemics and the value of these documents in identifying these epidemics.
- ✓ The ability to differentiate between the most frequently spread epidemics and the least prevalent ones and the causes leading to that.
- ✓ Shedding light on the documents themselves and the scientific weight of some documents compared to others.
- ✓ Distinguishing between the areas that were affected by the epidemics and those that were not. And if affected, it would be minor.
- ✓ The nature of the writers through their functions, whether they are doctors or just writers and historians.
- ✓ Differentiating between what is academic and scientific and what is just passing events (narrative).
- ✓ The value of the bibliometric study values the scientific value of the research.
- ✓ Finally, I point out the necessity of opening workshops for this study for the various theses so as to benefit statistically from its scientific value and determine the nature of the scientific value of academic work.

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