BIBLIOGRAPHICAL ESSAY

This essay deals with important relevant primary and secondary sources used in writing of this dissertation. All other sources not discussed in this essay have been listed in the Bibliography.

Primary sources have been divided into archival sources and published primary sources. Archival sources in Goa have been divided under three headings: I. Archival Sources at the Directorate of Archives, Archaeology and Museum. II. Manuscripts at the Xavier Centre of Historical Research. III. Church Records at the Patriarchal Palace (Paço Patriarcal). The published primary sources are covered under four headings: Missionary reports; Travellers; State Papers; Medical Journals.

Secondary sources have been grouped and discussed under five headings: Hygiene; Diseases and Epidemics; Medicinal plants; Institutional care and training; Miscellaneous.
A. ARCHIVAL SOURCES

1. Sources at the Directorate of Archives, Archaeology and Museum (Historical Archives of Goa, Panjim, Goa.

The Historical Archives of Goa has a large number of documents which form valuable primary sources for the history of the former Estado da India Portuguesa. Some of these sources have been used for the first time in this work. The bulk of the documents in Goa Archives are in Portuguese. Many of these documents are inadequately catalogued. Even a brief description with some comments on their value could be of help for someone desirous of undertaking further research in this theme. That is what is attempted here.

1. Monçoes do Reino

Monções do Reino is one of the largest collections at the Goa Archives, with over 450 manuscript volumes covering a period from 1560 to 1914. These volumes contain instructions, letters and other official matters sent by the Home Government in Portugal, some replies sent from Goa and extracts of many original documents. It includes information regarding administration, health, salaries, legislation, population statistics and other matters. Salaries paid to various officials in the seventeenth century are given in Ms. 203 B, Mss. 84 B, 86 A,
provide population statistics for the pre-census period, Mss 14, 85, 121 B, 131 B, 143 A, 161, 173, 196 C and 197 give information on health conditions. Prices of commodities are found in codex 168 C. They contain also information concerning the Royal hospital (Mss 185, 102 A, 133 B, 114, 164 B, 185, 209, 207 B, 212 A), various epidemic diseases, diseases suffered by soldiers during the journey to India and medical training facilities (Mss 55, 59, 161 D, 180 A, 178 A, 196 A, 198 A, 198 B). On an average each volume has about 300 folios. Many of these volumes have been published in the series entitled Documentos Remetidos da India. Some documents concerning the sixteenth and seventeenth century were published in J.H. Cunha Rivara's Archivo Portuguez-Oriental.

2. Provisões a favor de Cristandade

These are two codices (9529, 7693) with laws and decrees for promoting Christianity in India. Several restrictions imposed against the practice of native physicians are mentioned in these volumes. Ban imposed on non-Christians concerning slaves is also given in these volumes. These documents have been published in Livro do Pai dos Cristãos. Codex 9529 -- Provisões a favor de Cristandade has 206 folios and covers a period 1513-1840. It contains instructions issued in 1595 by Fr. Alexander Valignano (in Goa) to Pai dos Cristãos.
It contains also additional instructions issued later. Majority of these documents are dated around 1670. These documents have been indexed in Panduronga Pissurlencar's *Roteiro dos Arquivos da India Portuguesa*, Bastora, 1955, pp. 63-95. A list of the documents of this codex are found also in the *Boletim da Filmoteca Ultramarina*. Codex 7693 -- *Leis a favor da Cristandade* consists of 93 folios. The list of documents belonging to this codex were published in *Documenta indica*, (vol. iii), in above mentioned *Roteiro* and in the *Boletim da Filmoteca Ultramarina*, vol. 1.

3. **Provisões, alvarás e regimentos (1515-1598).**

These two volumes are copies of regulations issued in the sixteenth century. They include many original documents. Mss 3027 and 3028 contain regulations issued for the Royal Hospital in the first two decades of Portuguese regime in Goa. Some of these documents have been published in *Archivo Portuguez-Oriental*. These codices have about 250 folios each.

4. **Vencimentos Civis e Eclesiasticos (1626-1804).**

*Vencimentos civis* provide information about salaries paid to various Government servants. MS.3068 lists the salaries paid to Government servants right from the Governor to the peon in 1626. Codex 2317 with 492 folios is concerned
with salaries of Government servants in 1771-1772. Codex 1832 has a list of salaries paid to government servants between 1775-1804. In addition there is another codex 1598 with salaries paid to the clergy. These MSS. help us to judge standards of living of various classes in Goa.

5. Records of the Goa Municipal Council (Senado de Goa)

It is a very extensive series of MSS at the Goa Archives. They cover a period from 1535 to 1879. They are records on judgments passed by the Senate, charters, provisions, edicts, letters, patents, general registers, sale of stamped papers and other matters. Among these the Registos Gerais consist of codices with texts of licenses issued to various native Christians as well as non-Christians to practise as physicians, surgeons and bleeders in the city of Goa, besides licenses issued to artisans and merchants from 1570 to 1875. Ms. 1795 is an early nineteenth century copy of regulations issued in 1618 to improve the hygiene and other matters in the city of Goa. Some of these measures were in force until the nineteenth century.

6. Livro da receita e despesa de Medicamentos do Hospital do Convento de S. João de Deus

The manuscript is in good conditions and contains the daily prescriptions to the patients of the hospital and the expenses incurred by the hospital during 1733-1737.
7. *Regulamento do Hospital de Misericordia de Goa*

These are MSS 10425 and 10426. They contain regulations issued for the Hospital of the Misericordia in the seventeenth century. These two MSS are small and not in a very good condition. However, the writing is clear. Both the codices consist of about 12 folios each.

8. *Regulamentos (1830-1839)*

These deal with regulations issued to the Military Hospital in 1830 and 1840. Ms 646 consists of two parts. The first part deals with *Regulamento do Hospital Real Militar de Goa 1830*, and consists of 103 folios. The second part concerns the *Casa das Moedas* (Mint House), *Regimento provisório de Typografia de Goa* (Provisional regulation for the Printing Press of Goa), and *Trem Geral de Exercito de India Portuguesa*. The second part has 194 folios. The manuscript is not in good conditions. Ms.1836 -- *Regulamento para bom Governo do Real Hospital Militar de Goa e Botica annexa: comprehendendo os diversos ramos da sua administração, economia e política* is a rewritten copy of the regulation issued by the local Government on 31st December 1830 for the Military
Hospital. This copy was made in 1883. There is yet another copy (Ms. 1829) of the same regulation of 1830. This copy is wrongly dated on the cover as 1835. The second part of this manuscript has a new regulation issued for the same hospital in 1840.

9. **Directorate of Accounts collection of income and expenses of the Military Hospital.**

It is a very large series covering many areas of administration of Estado da India. There are more than 150 manuscripts volumes on income and expenditure of the Military Hospital from 1811 to 1887. Many of these manuscripts contain lists of medicine bought and sold at the hospital's pharmacy, inventory of clothing, utensils, furniture, list of employees and other matters. Some volumes include prescriptions given by the doctors and the methods to prepare them. They have also the lists of patients treated in the institution. Several of these volumes are in bad condition. They are moth eaten and have fungus marks. They are valuable sources of information concerning the hospital in the nineteenth century. Most of them have not been used until now.
10. *Papers of suppressed Convents* (*Papeis dos Conventos Extintos*)

Another large collection at Goa Archives belonged to the suppressed Convents in 1635. Some of these MSS are wrongly labeled. They provide information of income and expenses of the convents, the wages paid to the labourers and prices of various commodities. Fees paid for medical care are also mentioned. These MSS are good sources for information on the cost of living of various sections of the society in the city of Goa during the period they cover, namely from 1612-1635.

11. *Correspondencia Diversa*

This series consists of orders and circulars issued by the local Government to its various departments. They include orders concerning health and hygiene issued between 1888-1927.
II. Manuscripts at Xavier Centre of Historical Research.

a. Fonseca's Collection

*Fonseca's Customs and Manners/ Question and Responses* gives us a fairly good idea about the standards of living in Goa during the later half of the eighteenth century. They are sources of information about the prices of different market commodities, wages paid to different categories of labour, household expenses of various classes and many customs followed by the people around 1880s. It contains also information on the architecture and cost of building a house. Questions and Responses contain the replies sent by Parish Priests, Justices of Peace (*Regedores*) and Taluka administrators to the queries sent by Jose Nicolau de Fonseca while preparing his work entitled *An Historical and Archaeological Sketch of city of Goa.* (Bombay, 1878.)

b. Mhamai House Papers

Mhamai House Papers consist of nearly 200,000 loose papers and 250 codices from the last quarter of the eighteenth to the first quarter of the nineteenth century. They deal with trade that Mhamai family had with west coast of India, as well as with Portugal, Africa, Brasil and some Eastern countries.
The family was also involved in slave and opium trade. Some of the documents refer to medicinal plants and medicine imported to Goa from Brazil, Macau and the French Colony of Mahe. They mention also the cash transactions between the Mhamai family and the Military Hospital of Goa. The Mhamai brothers also supplied local medicine to their personal clients and kept records of the treatment. These papers are written in Portuguese, French, Old Kannada script, Persian, Modi script and Gujarati.

III. Church Records at the Patriarchal Palace (Paço Patriarcal).

Church records for socio-demographic studies have not been much used. Some of them contain important information on historical demography. The Archives of the Patriarchal Palace in Panjim (Goa) has a large collection of Church Rolls, Pastoral Visits and Parish Registers from the seventeenth century onwards. Some of these parishes no longer exist.

i) Rois das Igrejas (Church Rolls)

They contain yearly statistics issued by Parish Priests from 1773-1941 indicating the number of Christian inhabitants and information concerning their age, health, sex,
occupation and reception of sacraments. *Rois das Igrejas* were not always accurately maintained and were often filled without accurate field work. But these micro statistics can be an useful source for historical demography and for information concerning emigration among the Catholics in Goa. Latter roils also include Hindus in their statistics.

**ii) Visitas Pastorais**

They cover Pastoral visits from 1747-1927 to various Parishes in Goa, Belgaum, Khanapur, Malwan, Ratnagiri, Beed, Azra, Vingurla, Pune, Karwar and Sadhashivgad. They contain statements signed by sworn witnesses and taken down by the notary assisting the Archbishop during his visits to the parishes. In the eighteenth century the Pope had determined that the Archbishop should visit the parishes at least once every four years. The purpose of these visits was to check the state of faith and morality of the parishioners and to advise them to improve. The non-Christians in Goa living in predominantly Christian areas were also subject to these checks through secular authorities. The Christians were checked through the parish priest or his assistant. The Christians were often involved in abuses such drunkenness, usury, prostitution, slavery, adultery, exploitation of labour and non-observance of religious practices. These documents also deal with matter concerning *contrarias*, churches, chapels, cemeteries and
financial problems. They provide lists of children confirmed by the Archbishop. These records consist of 19 volumes. Each volume is made up of two original separate books with independent numbering of folios.

iii) Parish Registers

The registers pertaining to existing parishes are well maintained and up to date. They are copies of registers maintained by parishes in Goa, Daman and Diu. All births, marriages and deaths among the Christians were registered at the parishes. They give us indication of causes of death, the age of the concerned individuals and professions. They are a rare source of information on infant mortality and its causes among the Christians population.

B. PRIMARY PUBLISHED SOURCES

1. Church and Missionary reports

These have been included among primary sources, because unlike the other passing travellers the Church had become a local institution and the missionaries had more stable and permanent contact with local population. As such they were more involved in the living conditions of the people for whom they worked.
Missionaries have written many reports on Goa and other parts in the East where they had their missions. Some of them are good sources of information on the conditions of health in the sixteenth and the seventeenth centuries.

*Documenta Indica*

*Documenta Indica* edited by Josef Wicki are published in 18 volumes so far. They contain documents and letters written by Jesuits to their superiors in Rome and Portugal, and to their counterparts and friends in Europe. The letters were a kind of progress reports written to keep the Superiors in touch with their Missions. Some letters were given wide publicity in the sixteenth century. They were meant for the enlightenment of the members of the Order and its friends. These letters had profound influence on the Catholic world. As a result many joined the Society of Jesus. They cover a period from 1540 to 1597. Missionaries sent interesting news about their activities, customs, religions, conditions of life, health, hygiene and study of races.
This series edited by Antonio da Silva Rego consists of 12 volumes covering 1499 to 1582. Many of these documents provide details about the expenditure and income of the Royal Hospital and other health matters of the time. Several of the Jesuit documents included in these volumes have also been published in Documenta Indica. However, it includes documents concerning the Franciscans, Augustinians and Dominicans as well.

*Bullarium Patronatus*

*Bullarium Patronatus in ecclesiis Africae, Asiae atque Oceaniae, Tomo I* edited by V. de Paiva Manso contain the proceedings and decrees issued by Church Provincial Councils held in 1567, 1575, 1583, 1592, 1602, as well as those of the Synod of Diamper. The Church Councils were held in Goa to implement the directives of the Council of Trent held between 1545-1563. The proceedings of these Councils discussed various issues concerning local society including certain local customs which were seen as problems for the practice of the new faith. Among such problems mentioned are: People seeking help of Hindu dais and native Hindu medicine men who were accused of inducing their patients into making votive
votive offerings to the Hindu deities and temples. The minutes of these Councils were also published by J. H. da Cunha Rivara in vol. IV of Archivo Portuguez-Oriental.

2. Travellers Accounts

These could be regarded as quasi-primary sources for being contemporary witnesses of events. However, all that they reported was not always necessarily from their personal observation. Some travellers drew information from earlier travellers when they published their travelogues years after their visit to Goa. Many also included heresay information which can be accepted if corroborated by other accounts of the period or by official records.

Many European travellers have visited Goa in the past. Some like Bernier, Careri, Freyer, Manucci were medical practitioners who left accounts on the state of health in Goa. The accounts of the travellers also contain abundant references to topics connected with life in the city of Goa.

One of the first travellers to whom detailed reference has been made in this work is the Dutchman John Huygen van Linschoten who visited Goa at the close of the sixteenth century when the Portuguese empire was still displaying its glory. He has described in detail the conditions of health,
certain habits in personal care that he noticed in Goa, the uses of many medicinal plants and superstitions followed in Folk medicine. Accounts about the life in the city of Goa are also found in the works of Ralph Fitch and James Forbes.

A similar account to the one given by Linschoten and very interesting is of Pyrard de Lavai, a Frenchman who was a patient at the Royal Hospital in the early seventeenth century. Pyrard gives a vivid description of the Royal Hospital and other aspects of city life. He was impressed with personal care of the people.

John Albert Mandelslo was a member of the embassy sent by the Duke of Holstein to Muscovy and Persia. He visited Goa around 1638. He provides a glimpse of life-style of the upper strata and describes a dinner party he attended in one of their homes.

The Italian Pietro della Valle noticed the declining conditions of the city of Goa around 1623. François Bernier, one of the first French physician who came to Goa in 1656 paid tribute to native physicians and their art of treating the sick.
Once described by Pyrard as the best in the world are found in the accounts of Thevenot, Tavernier and Careri. Tavernier blamed the declining conditions in Goa to the effects of war with the Dutch. The system of constant bleeding, corruption and malpractice are considered as factors responsible for the decay of the Royal Hospital. Dr. John Fryer who arrived in Goa at the end of 1675 has left behind vast amount of small information which would escape more scientific minds and which is always interesting. He describes the habits of hygiene of the natives and unusual practices followed by them in the disposal of waste. Manucci refers to health conditions and many malpractice of Portuguese physicians in Goa. Manucci came twice in Goa. He visited Goa for the first time in 1667 and subsequently in 1681. His large professional practice in Goa aroused the jealousy of the Portuguese physicians.

The declining standards of living are described by Kottineau de Klogen who visited Goa in early nineteenth century.

3. State Papers

Archivo Portuguez-Oriental

These 10 volumes edited by J.H. da Cunha Rivara (Nova Goa 1857-76). Most of the documents belong to the sixteenth century. Fascicles II, III, IV, V and VI have been much
used in this work. They contain various regulations concerning hygiene and medical care as well as regulations issued for the Royal Hospital of Goa. Many of the regulations are no longer available in its original form at the Goa Archives. Fascicle IV contains the minutes of the ecclesiastical councils of Goa.

\textit{Census of Estado da India}

The first census was carried out in 1881 as a result of the Anglo-Portuguese Treaty. Decennial censuses were carried out in Goa from 1900 onwards. These censuses took into account all population present and temporarily absent. They are of importance to a demographic historian. The censuses provide information about population density, sex ratio, literacy, occupation, marital status and fertility rate. Some of these censuses are in bad physical conditions specially the ones of the early twentieth century. Earlier in many places the census enumeration was done by village regedores (justice of peace) without on the spot checks.

\textit{Legislação relativa ao Estado da India}

This series covers all laws and decrees issued for Estado da India from 1901 to 1960 by the Government. Municipalities and other bodies. This series contains among other
things measures approved by the Government to tackle epidemics and diseases, to provide health care and medical training during the last 60 years of the Portuguese regime.

*Secretaria dos Serviços de Saúde do Estado da India reports.*

These are annual reports submitted by the Directors of Health Services to the Governors of *Estado da India* the present century. The reports were based on the information sent by various taluka Health officers and doctors in charge of medical institutions in Goa, Daman and Diu. They are useful sources for the twentieth century health conditions in the State and measures planned and implemented to improve the conditions of the inhabitants. The bulk of these reports in the possession of Health Services of Goa have been destroyed when the department was shifted after liberation of Goa from the old building to the present one. The Central Library Panjim and Biblioteca National (Lisbon) have some copies of these reports belonging to the late nineteenth century and first three decades of the twentieth century. A set from the Secretariat is now with the Goa Archives but is not made accessible to the readers.
Government Gazettes

Boletim do Governo was started in 1837 and Boletim Oficial in 1879. These weekly state papers contain orders issued by the Government among other matters concerning medical care, legislation, appointments of medical personnel, etc. They had two parts, namely official and unofficial. The Goa Archives and the Central Library (Panjim) have almost a complete collection of Boletim do Governo do Estado da India. However, some numbers are in bad conditions.

4. Medical Journals

Revista Medico-Militar da India Portuguesa

Medico-Militar da India Portuguesa edited by Augusto Carlos de Lemos, was published in early 1860s at Hospital Regimental. It was a monthly consisting of about 24 pages in the months of February, May, August and November, and 20 pages in the remaining months. Few issues of this journal are now available. It contains information about the climate and sanitary conditions during various seasons of the year.
Archivo de Pharmacia e Sciencia Accessorias da India Portuguesa

This monthly journal was edited by Antonio Gomes Roberto. It started in early 1860's and closed in December 1871 and contains information on conditions of health and hygiene. The uses of several medicinal plants and minerals are also mentioned in many of its issues.

Archivo Medico da India

Archivo Medico da India a monthly journal of medical and pharmacopic science, was edited by Pantaleao Ferrao, Bastora. The journal was started in July 1894 and closed down in May 1896. The issues contains among other things information about medicinal plants.

Boletim Geral de Medicina e Farmacia

Boletim Geral de Medicina e Farmacia was a six-monthly journal started by Dr. Froilano de Mello in 1911. It contains information concerning health conditions in Goa, Daman and Diu. Many of its issues give detailed information about folk medicine and traditions followed by people to cope with disease. This journal continued to be published as late as 1954.
Arquivos da Escola Medico Cirurgico de Nova Goa

Arquivos da Escola Medico-Cirurgica de Nova Goa was started by Dr. Froilano de Mello around 1927. It was published in two series. "Series A" contains exclusively scientific investigations carried out by the teaching staff and students of the Goa Medical School. "Series B" provides reports on the health conditions of Goa and academic matters of the Goa Medical School. These volumes are an important source of information about health of the inhabitants of Goa in the last six decades of the present century. It is a useful source of information also on infant mortality, epidemics and the work done to control them. It also provides statistics of the patients treated in hospitals in Goa and information about doctors graduated from the Goa Medical School.

Anuario da Escola Medico

Anuario da Escola Medico Cirurgica de Nova Goa was published by Goa Medical School and covers the activities of the School. It also contains lists of the staff in addition to short bibliographical sketches of some important members staff of the Goa Medical School including its Director. The first issue was published in 1909. Volume for 1909-1910,
1911, 1916-1917, 1922-1923, 1924 and 1925 are available at the Central Library, Panjim.

C. SECONDARY SOURCES

1. Hygiene

Although hygiene played a very important role in health very little has actually been written about hygiene in Goa during the colonial regime.

Germano Correia has touched on problems of hygiene in the city of Goa during the rise and decline of Portuguese empire India in his work *La Vieille Goa* (Nova Goa, 1931). In early twentieth century Aires de Sa published his *Higiene de Panjim* (Nova Goa, 1908). It is a critical work on sanitary conditions of Panjim in the late nineteenth and early twentieth centuries. In this work he has made several suggestions to improve the sanitation of the capital town. There is practically nothing written about rural hygiene.

2. Diseases and Epidemics

Works on diseases and epidemics are mainly published in medical journals such as *Boletim de Medicina e Farmacia* and *Arquivos da Escola Medico-Cirurgica de Nova Goa* and in the
form of small booklets. This topic has been discussed by doctors in charge of health services or by those directly involved with epidemics. F. Wolfango da Silva, Antonio A. de Rego, Froilano de Mello, Germano Correia, L.J. Bras de Sa and some others have discussed at length the epidemic and endemic diseases in Goa.

There are also few works published in book form: Garcia d'Orta's *Colloquios dos Simples e drogas e cousas medicinaes da India e assim de alguns fructas achadas nella* (Lisboa, 1877) discusses many diseases prevailing in the country in the sixteenth century and provides various methods to heal them.

Another work on this subject is Germano Correia's *A cholera-morbo na India Portuguesa, desde a sua conquista ate a actualidade --Estudo nosografico, epidemiologico e climato-sanitario.* (Nova Goa, 1919). A reliable and comprehensive account of cholera in Portuguese India from 1543-1919. Correia's other work entitled *As pestilencias na India Portuguesa* (Nova Goa, 1922) is small book that describes many epidemics in Goa that broke out from early times.

Luis de Pina in his booklet entitled *Subsidios para historia da medicina Portuguesa Indiana do seculo XVII.* (Porto, 1931) gives a brief description of diseases and the methods of treatment used by the Portuguese to cure fevers
and some other diseases in India. It also discusses medical facilities on the board of ships sailing between Portugal and India.

1a. *Conferencia Sanitaria 1914 (vol. II)*

Proceedings of the First Sanitary Conference 1914 (Nova Goa 1917) contains papers presented at the conference by many Goan doctors. Epidemics and causes of various infectious diseases are discussed in these papers. They provide also information on infant mortality in Goa in early twentieth century.

3. Medicinal Plants

A great deal of work has been done on this topic by Goan doctors and the Portuguese ones who have worked as physicians in Goa.

Garcia d'Orta, the first writer on tropical medicine has left a very interesting and useful work on plants and drugs available in Goa and some other parts of India. It describes the uses of these various plants in healing diseases. Many of these plants were cultivated by García de Orta in the gardens attached to his residences in Goa and Bombay. García d'Orta, who was in India for about 30 years travelled
extensively and studied plants of Ghats, Central India and other places.

Another Portuguese physician who made a study of plants in India is Cristovão da Costa also known as Cristobal Acosta. He came to Goa in 1568. On his return to Europe he settled in Spain where he published *Tratados das Drogas e Medicina das Indias Orientais* (Lisboa, 1964). There are many things in common between this book and Garcia de Orta's *Colloquios*. Cristovam Costa used extensively the work of Garcia. Besides describing plants he explains how they were propagated.

D. G. Dalgado who worked as a medical officer for 22 years at Savantwadi has written two books on plants of Goa and Savantwadi. *Flora de Goa e Savantwadi*, (Lisboa, 1898) provides botanical names as well as English, French and Konkani names of the common plants. It lists more than 1,000 plants including 275 exotic plants brought to Goa by the Portuguese from Brasil and other parts of the East.

Dalgado's other work is entitled *Classificação botânica das plantas e das drogas descriptas nos Colloquios da India de Garcia d'Orta* (Bombay, 1894). It is a scientific classification of plants described by Garcia d'Orta in *Colloquios*. The book has an index of *colloquios*, name of the drugs.
and plants in Konkani and five pictures of useful and important plants.

Lencastre Pereira in his *Plantas Medicinais de Goa* provides a list of plants in Goa along with their botanical and vernacular names. It also mentions the places where these plants are found in abundance, their history, description, methods of propagation and their therapeutical uses.

Caetano F.X. Gracias describes plants with their mythology, classification, botanical names, medicinal and other uses of plants. His work entitled *Flora Sagrada da India* (Margão, 1912) studies also chemical composition of various plants and fruits.

Another book on medicinal plants is that of J.R. dos Remedios Barreto's *Plantas medicinais de Goa*, Bastora, 1959. In this work the author describes the use of many medicinal plants of Goa.

4. Medical Institutions and Training Facilities

The history of Goa Medical School has been written by João Manuel Pacheco de Figueiredo (senior) in various papers published in the *Arquivos da Escola Medico Cirurgico de Nova*
Goa and other medical journals as well as in papers presented at various conferences abroad.

Germano Correia has two works on the subject. The first one entitled *O ensino de Medecina e Cirurgia em Goa nos secu-
los xvii, xviii, xix: Historia do ensino medico-cirurgico no
Hospital Real de Goa antes da fundação da Escola Medica-
Cirurgica de Nova Goa* (Bastora, 1941) narrates the type of
medical training provided to the natives in the Royal Hospital
before the establishment of Goa Medical School. His *Historia
do ensino medico na India Portuguesa* (Nova Goa, 1919) de-
scribes the formal training provided at the Goa Medical School
from 1842 to 1917.

The history of *Santa Casa Misericordia de Goa* is nar-
rated by J. F. Ferreira Martins in 3 volumes entitled *Historia
de Santa Casa Misericordia de Goa*. It covers a period from
1520 to 1910. He produces several documents concerning Santa
Casa in Goa. These volumes have several errors and is often
confusing as well as disorganised. But it is a basic publica-
tion on the subject.

*Enciclopeadia Portuguesa Brasileira* (Lisboa) is a good
source of information about some eminent doctors who worked in
Goa and Goan doctors who worked in the Portuguese colonies
in Africa. These volumes contain few errors concerning date of
birth. Another source of information about eminent doctors is *Escola Medico-Cirurgica de Nova Goa 1842-1957* (Bastora, 1957) published by Goa Medical school and *Escola Medico-Cirurgica de Goa -- Monografia* (Nova Goa, 1959). J. P. Peregrino da Costa in his *Expansão do Goes pelo Mundo* (Goa, 1956) gives information about the contribution of many Goan doctors in different parts of the world. His other work concerning Goan doctors *Medicos da Escola de Goa nos Quadros de Saude de Colonias* (Bastora, 1944) is a detailed account of work done by some Goan doctors in the Portuguese colonies. In his *Escola Medica de Goa e a sua projecção na India Portuguesa e no Ultramar* (Bastora, 1957) he describes briefly the contribution of some Goan doctors - graduates of Goa Medical School to Portuguese India and Portuguese overseas colonies.

*The Indo-Portuguese Review* (Calcutta, 1921-1925) is also a good source of information on some Goan doctors specially concerning those who worked in British India.

**Miscellaneous**

STATISTICAL

AND

DOCUMENTARY

APPENDICES
APPENDIX 1-A

Least Expenses - 1870

(a) Poor Family

Clothing (4.4%)  Alcohol (11.6%)  Meat (0.6%)  Condiments (4.9%)  Rice (78.6%)  

Least Expenses - 1870

(b) Middle Class Family

Beverages (6.3%)  Servants (4.2%)  Rice (31.6%)  Fish (6.3%)  Alcohol (14.7%)  Condiments (4.2%)  Meat (6.3%)  

Least Expenses - 1870

(c) Rich Family

Wood (5.4%)  Beverages (13.6%)  Rice (13.4%)  Fish (5.4%)  Condiments (2.7%)  Bread (10.5%)  Servants (4.1%)  Meat (16.4%)  Clothing (22.6%)  Alcohol (6.3%)  

Source: J. N. da Fonseca's Customs and Manners, (at XCHR).
APPENDIX 1-B

EXPENSES IN 1923
Christian Kunbi Family

- Tobacco & Drinks (7.3%)
- Fuel (3.2%)
- Clothing (10.7%)
- Food (78.8%)

EXPENSES IN 1923
Hindu Farmer Family

- Tobacco & Drinks (12.8%)
- Fuel (0.8%)
- Clothing (9.8%)
- Food (77.0%)

Source: Pedro Correia, "O Problema da Mao d' Obra Agricola na India Portuguesa"
7º Concilio Provincial da India Portuguesa Nova Goa, 1927, pp. 54-58.
APPENDIX 2 - A

GROWTH OF POPULATION IN GOA 1600–1881

Source: Information compiled from the MSS. Moncoes do Reino in Goa Historical Archives.
APPENDIX 2-B

GROWTH OF POPULATION IN GOA 1881-1961

Source: 1881 - 1961 Census Reports.
Density of Population in Goa 1881–1960

(Persons per Sq. Km.)

Source: 1881 - 1961 Census Reports.
APPENDIX 2-D

Percentage Distribution of Population
Religion-wise 1881-1960

Source: 1881 - 1961 Census Reports.

515
APPENDIX 2-E

Infant mortality in two densely populated villages of Aldona and Moira (Bardez) from January to September 1914.

<table>
<thead>
<tr>
<th>Month</th>
<th>Born</th>
<th>Still</th>
<th>Death due to</th>
<th>Death due to</th>
<th>Total deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>23</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Februrary</td>
<td>31</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>March</td>
<td>39</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>April</td>
<td>24</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>May</td>
<td>32</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>June</td>
<td>23</td>
<td>3</td>
<td>-</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>July</td>
<td>22</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>August</td>
<td>27</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>September</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>15</td>
<td>11</td>
<td>29</td>
<td>55</td>
</tr>
</tbody>
</table>

Table below indicates the number of houses with toilet facilities in 1950.

<table>
<thead>
<tr>
<th>Talukas</th>
<th>Total Houses</th>
<th>Without Toilets</th>
<th>With Toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilhas</td>
<td>14793</td>
<td>2962</td>
<td>11831</td>
</tr>
<tr>
<td>Bardez</td>
<td>27953</td>
<td>8102</td>
<td>19851</td>
</tr>
<tr>
<td>Salcete</td>
<td>27493</td>
<td>9004</td>
<td>23363</td>
</tr>
<tr>
<td>Mormagao</td>
<td>5747</td>
<td>1117</td>
<td>4692</td>
</tr>
<tr>
<td>Ponda</td>
<td>11369</td>
<td>116</td>
<td>11253</td>
</tr>
<tr>
<td>Pernem</td>
<td>8908</td>
<td>79</td>
<td>8829</td>
</tr>
<tr>
<td>Quepem</td>
<td>5667</td>
<td>247</td>
<td>5420</td>
</tr>
<tr>
<td>Sanguem</td>
<td>4988</td>
<td>120</td>
<td>4868</td>
</tr>
<tr>
<td>Canacona</td>
<td>4709</td>
<td>36</td>
<td>4673</td>
</tr>
<tr>
<td>Satari</td>
<td>4693</td>
<td>13</td>
<td>4680</td>
</tr>
</tbody>
</table>

Source: Census 1950.
On 12th February 1601 the captain of the city, the alderman, other officials of the Municipality and myself, Antonio Monteiro, the Secretary of the Municipality of this noble city. Large number of Fidalgos, knights and other citizens connected with the administration were also present. The judge of the house of twenty four and majority of its members also attended the meeting.

The presiding councilor Nuno Velho de Macedo, told the assembly that the viceroy Ayres de Saldanha had requested the Senado (council) to consider the urgent need of water supply to the city, particularly in hot months of April, May and June, when most of the wells dried up. The viceroy had suggested that the Council must consider having water tanks and fountains such as were common in the towns and cities of Portugal and other parts of Europe. The presiding councilor explained that this could be undertaken with moderate expenditure by making use of the water of Timaya's tank which lay above Trindade and contained abundant water throughout the year. The undertaking would not fit within the bounds of the normal budget of the city, it would be necessary to finance it with funds from 1% additional Custom revenue.

There was difference of opinion among those present regarding the place to which the water from the reservoir
should be directed. The justice of the peace then directed those present to take an oath and express their opinion in private through a secret ballot. It was decided by sixty-three votes to take the work and to finance it with 1% revenue. They also decided that the water should be directed to the old pillory which was considered as more central. A majority of fifty-three stood for this location. These resolutions were endorsed by the captain, the alderman, the other officials and by all the other present. The proceedings were recorded by Afonso Monteiro, the Secretary of the Council.

Signatures

Source: HAG: MS 7765 -- Assentos da Camara, fns. 124v-126v.
Table below indicates the number of houses with piped water facilities in 1950.

<table>
<thead>
<tr>
<th>Talukas</th>
<th>Total Houses</th>
<th>Without Piped Water</th>
<th>With Piped Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilhas</td>
<td>14793</td>
<td>14587</td>
<td>206</td>
</tr>
<tr>
<td>Bardez</td>
<td>27953</td>
<td>27953</td>
<td>51</td>
</tr>
<tr>
<td>Salcete</td>
<td>27493</td>
<td>27493</td>
<td>-----</td>
</tr>
<tr>
<td>Mormagao</td>
<td>5747</td>
<td>5696</td>
<td>-----</td>
</tr>
<tr>
<td>Ponda</td>
<td>11369</td>
<td>11369</td>
<td>-----</td>
</tr>
<tr>
<td>Pernem</td>
<td>8908</td>
<td>8908</td>
<td>-----</td>
</tr>
<tr>
<td>Quepem</td>
<td>5667</td>
<td>5667</td>
<td>-----</td>
</tr>
<tr>
<td>Sanguem</td>
<td>4988</td>
<td>4988</td>
<td>-----</td>
</tr>
<tr>
<td>Canacona</td>
<td>4709</td>
<td>4709</td>
<td>-----</td>
</tr>
<tr>
<td>Satari</td>
<td>4693</td>
<td>4693</td>
<td>-----</td>
</tr>
</tbody>
</table>

Source: Census 1950.
On 3rd November, 1601, the Captain of the city, the aldermen, and the other officials of the Municipality met in session. The attorney Francisco Serrão informed those present that the Viceroy had directed to bring to their notice that the streets and lanes were dirty. This was the cause of diseases and of descredit to the Municipality. Therefore, it was proposed to warn the town beadles to check the evil in the ward assigned to them with the penalty of losing their jobs or any other punishment which the Municipality may think appropriate. These beadles had to keep a watch and punish those who messed up the place.

The following beadles were called by the assembled: Francisco Dalgado, beadle of the High Court. Manoel Peixoto, beadle of the House of Accounts. Antonio Gonsalves, beadle of the Custom House, Aleixo Girão, town constable. and Manoel Rodrigues da Costa, beadle assisting the market inspectors, and Francisco Gonsalves, town beadle. To all of them it was announced what the Viceroy wished to be conveyed. To each of them different wards and suburbs were assigned. The Secretary
of the Municipality recorded the proceedings and the Captain, the alderman and other officials signed the act.

Signatures

Source: HAG: Ms. 7765--Assentos da Camara, f1s.144-144v.