

**Spatial Distribution of Health Care Facilities in Osmanabad District**

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**ABSTRACT**

The study of health care facilities is the integral part of Health Geography. Health care is defined as a Programme of services that should make available all facilities of health and allied services necessary to promote and maintain the health of mind and body. In this paper researcher has attempted to analyze the spatial distribution pattern of the existing health care facilities available in Osmanabad District. The units like Primary health centers, Health sub-centers, Hospitals, Dispensaries, and number of Hospital beds, Nurses and Doctors available are also considered for this study. The data used in the present study are concerned with public and public aided institutions as well as private institutions published in district statistical abstract by Government of Maharashtra. To study the spatial distribution of health care facilities, the Number of health institutions per 100000 Populations has been calculated for each health care facility and four distributions levels have been decided on the basis of quartiles. Various norms suggested by different health committees, taking these norms, expected values of primary health centers, health sub-centers, hospital beds, and doctors have been calculated and percentage of deficiency has been obtained. Finally, deficiency areas of health care facilities have been demarcated.

**KEYWORDS:** Dispensaries, Health Care, Primary Health Care, Health Sub-centre, Public, Private,

**INTRODUCTION:**

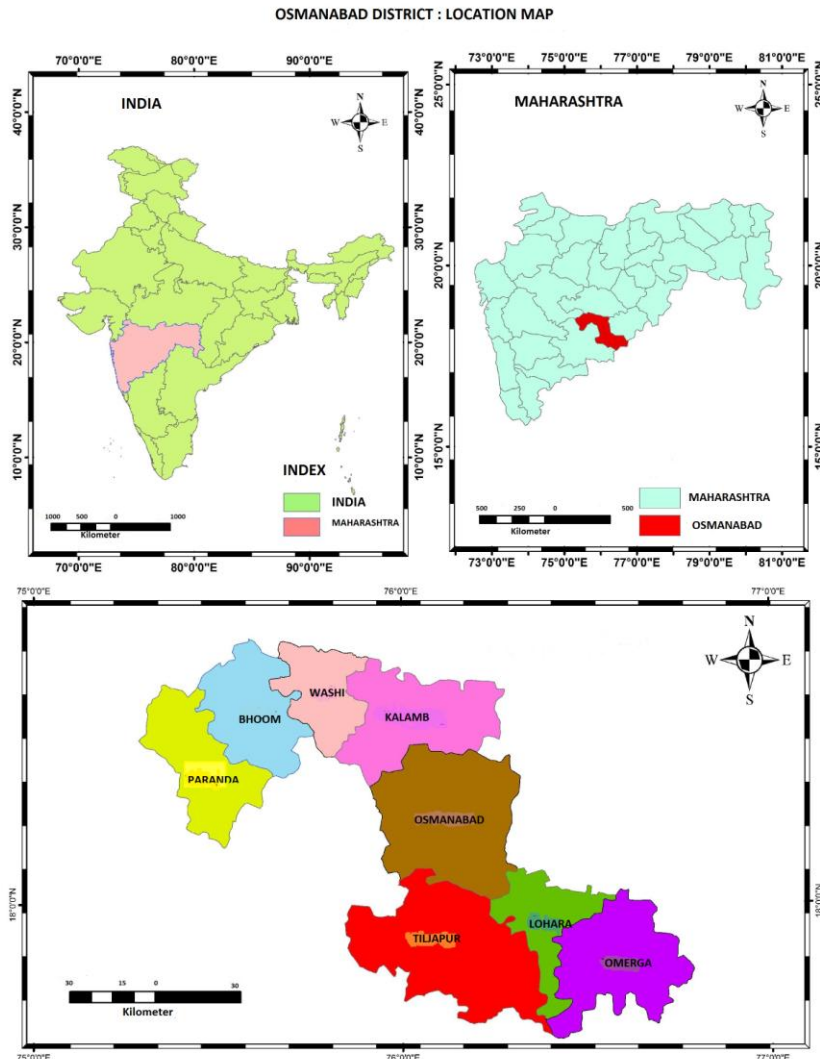
The study of health care facilities is the integral part of Health Geography. The overall organizational structure and system of public health care provision are not very different across the country. Even though health is a state subject most states follows a similar pattern of health care administration and management. This is largely because of a common planning framework, which is governed by the planning commission and National Development council (R.Duggal, and et. all 2005). Health care is defined as a Programme of services that should make available all facilities of health and allied services necessary to promote and maintain the health of mind and body (Agnihotri, R.C, 1995). In this Programme, the physical, social and Family environment should take in to account (consideration) in the view of Prevention of diseases and restoration of health.

The health services may be analysed in terms of the community for which they serve and deal with. These services are the integral part of a particular health system and represent responses to the health

concern and to the health needs. Sub-centre, Hospitals, Dispensaries, and number of hospital beds available are also considered for this study.

## **STUDY REGION:**

Osmanabad is one of the district of Marathwada region of Maharashtra and famous for Tuljabhavani temple at Tuljapur. It is situated in the southern part of the State abutting Karnataka in south and lies between north latitudes  $17^{\circ}35'$  and  $18^{\circ}40'$  and east longitude  $75^{\circ}16'$  and  $76^{\circ}40'$  and 47 N, 47 O, and 56 C. The district has A Geographical area of 7512 sq. km. The district headquarters is located at Osmanabad Town. It has 8 Tahsil i.e., Osmanabad, Tuljapur, Omerga, LoharaTahsil in Osmanabad sub division and Kallam, Bhoom, Paranda, Washi in Bhoom sub division. It has a total population of 14,86,586 as per 2001 census. The year may divide four seasons. The average annual rainfall in the district is about 740 mm.



## **OBJECTIVES:**

- 1) The Study of primary health care facilities Osmanabad district
- 2) The Study of Health care System in the Osmanabad District.

## **DATABASE AND METHODOLOGY:**

The researcher proposes to analyses the available data at various stages is being Calculated by using various statistical methods. The distributional pattern of health care facilities is to be investigated at district level. The units like P.H.C., P.S.C, Hospitals, Dispensaries, and number of Hospital Beds, Doctors and Nurses available are also considered for this study. The data used in the present study are concerned with public and public aided institutions as well as private institutions published in district statistical abstract by government of Maharashtra. To study the spatial distribution of health care facilities, the number of health institutions per 100000 Populations has been calculated for each health care facility and four distributions levels have been decided based on quartiles. The various graphical and distributional methods are used for showing distribution. Various norms suggested by different health committees, taking these norms, expected values of primary health centers, health sub-centers, hospital beds, and doctors have been calculated and percentage of deficiency has been obtained. Finally, deficiency areas of health care facilities have been demarcated. The data collected, has been Analysed by choropleth method is used for Understanding comparison, quartile techniques have been used for dividing the parameters in different ranges to obtain the levels of distribution. The various graphical and distributional methods are used for showing distribution.

## **Analysis and Data Analysis:**

### **Health Care Systems:**

In Osmanabad District, the system of health care facilities is mainly based on the Modern allopathic system of treatment rendered through a system of hospitals, Dispensaries and primary health centers. Government Ayurved college, located at Osmanabad provide research cum education and Training facilities as well as highly intensive health care in their hospitals.

### **I. Hospital**

Hospital plays an important role in providing the preventive, promotive and rehabilitative services to local community including training and research (Agnihotri, R.C.1995). The organizational system of hospitals consists of regional hospital, district hospitals and local hospitals. In the study area, Ayurved college hospital at the second order hospitals are the district hospitals

located at each district headquarters. In addition, district hospitals provide general treatment and facilities. There are 10 hospitals in the study area.

## **II. Dispensaries**

Dispensaries are fourth order medical facilities providing normally outdoor Treatment with the help of one physician and one pharmacist. There are 18 dispensaries in the District. Dispensaries are mainly concerted in the rural areas.

## **III. Primary Health Centers:**

Primary health center play an important role in the health care system emphasizing preventive rather than curative services. It provides the first contact care to villagers. Primary health centre extends both outdoor and indoor treatment facilities as well as field services such as vaccination, family health care, family planning, blindness and leprosy control etc. (Agnihotri, R. C.1995). There are 42 primary health centers in the study area.

## **IV. Health Sub-centers:**

Each primary health center commands over four to five sub-centers. The main functions of the sub-centers are maternity and child health, collection of vital statistics, treatment of minor ailments, immunization, prevention of malnutrition and health education in respect of common communicable diseases, family planning services and counseling etc. There are 206 Health sub-centers in the study area existing mainly in rural areas.

## **Private Hospital in Osmanabad District.**

<b>SrNo</b>	<b>Tahsil</b>	<b>No. of Private Hospital</b>
1	Osmanabad	72
2	Tuljapur	55
3	Bhoom	16
4	Padanda	12
5	Washi	07
6	Kalamb	30
7	Lohara	11
8	Omerga	65
		<b>Total - 268</b>

*Source: Survey*

## **Private Hospital:**

The number of private hospital in Osmanabad district is as follows: Osmanabad-72, Tuljapur-55, Bhoom-16, Padanda-12, Washi-07-Kalamb-30, and Lohara-11 Omerga-65 are the

number of private hospitals; most of these private hospital have all facilities and equipment.the number of beads in private hospital in Osmanabad,Omerga, Tuljapur, and Kalamb ,Tahasil in all the above specialty hospitals can be seen in Proportion to the Population, but the population of private hospitals in Washi,Bhoom,Lohara,and Paranda Tahasil are very few.

### **Distribution of Health Care Facilities**

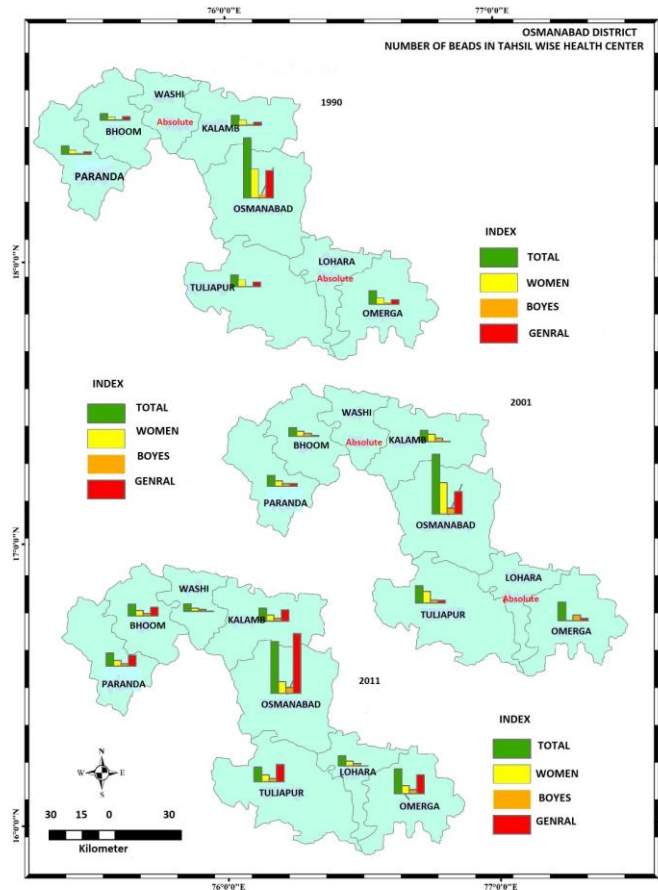
The spatial organization of health care facilities, likewise other commercial and retail functions appears to be affected by interrelated factors of physiographic constraints, development of agriculture, nature, type and location of industrial units and various demographic characteristics. A cumulative effect of positive or negative interaction of these factors has contributed towards a spatial pattern of effective demand, and the distribution of health facilities responds to this effective demand neglecting the need of the people (Mc Glashan N.D.1974). The disparity in the distribution of health care facilities is well pronounced. It is highly centralized. Though 80 percent of the Indian population lives in rural areas, where 11 percent of the physicians practice in these areas (Banarjee Guha, S. and Joshi, S.1985). To study the spatial distribution of health care facilities, the number of health institutions per 100000 populations has been calculated for each health care facility

**Trends of Health Care Facilities in Osmanabad District 1990 to 2011**

Year Taluka	1990				2001				2011			
	Total	Female	Child	General	Total	Female	Child	General	Total	Female	Child	General
Paranda	54	28	10	16	74	38	18	18	90	40	18	32
Bhoom	42	20	00	22	60	35	20	5	80	37	18	25
Washi	00	00	00	00	00	00	00	00	50	22	12	16
Kalamb	66	36	10	20	78	52	24	2	90	42	20	28
Osmanaba d	394	191	23	180	411	216	41	154	356	80	40	236
Tuljapur	76	46	00	30	118	80	20	18	100	47	22	31
Lohara	00	00	00	00	00	00	00	00	70	32	16	22

Omerga	90	44	15	31	128	74	39	15	170	55	26	89
Total	<b>722</b>	<b>365</b>	<b>58</b>	<b>299</b>	<b>869</b>	<b>495</b>	<b>162</b>	<b>212</b>	<b>1006</b>	<b>355</b>	<b>172</b>	<b>479</b>

*Source: RHC in Osmanabad District.*



**Conclusion:**

This research paper shows the important findings of tahsil wise spatial distribution of Health Care Facilities in Osmanabad district. The whole analysis is based on population density of health care facilities available in the district. It is found that the availability of health care facilities in the district is inadequate from all standards.

This Study considered major medical facilities, such as Hospital, Dispensary, Primary Health Centers, Health Sub-centers, Hospital Bed, Doctors, Nurses and Staff. The distribution of Primary Health Centre is not same in Osmanabad district. To study the spatial distribution of health care facilities, the number of health institutions per 100000 populations has been calculated for each health care Hospital Bed facility for Child, Female, and General Patient.

**Suggestion:**

As per the norms one Primary Health Centers per 30,000 persons in rural area and 20,000 persons in tribal area. That is in 1990 the Number of beds was 1444, in 2001 it increased to 1738 and in 2011 it increased to 2012. The Number of beds appears to have increased over a period of 20 Years.

There is no ideal situation in any tahsil excluding Washi, Lohara tahsils. Primary Health Centers and Health Sub-centers according to the norms in the study region. In Osmanabad District the Government needs to look at the Facilities in the district as there is no increase in the Population during the 20 years from 1990 to 2011.

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