

Spatio –Temporal Distribution of Medical Facilities in Satara District

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Abstract.

India is a fragmented country and ranks second in the world in terms of population. In addition to providing food, clothing and shelter to the entire population, it is equally important to take care of their health. Therefore there is only one public health system in India. In the Satara district 1 district hospital, 2 sub-district hospitals are available. There is one rural hospital in each taluk. Most rural hospitals are in Khatav (4) taluk and lowest rural hospital is in Mahabaleshwar Taluk. Distribution of primary health centers is not the same. Most primary health centers are in Patan Taluk (13). There are 72 primary health centers in Satara district. Karad taluk is the most developed taluk and there is one sub-district hospital named Venutai Chavan sub-district hospital and 11 primary health centers are available there.

The medical geography is a systematic study done by considering the local study of diseases and possible dangers in the future planning. As the medical geography study medical elements related to space, the study of the local medical facilities is considered as the integral part of medical geography.

Researchers have studied the population of health facilities in the district and the number of nurses, guides, and doctors' facilities available in the background of medical services in the state of Maharashtra. In the references of medical services of Maharashtra state, the medical facilities in the district are studied by the researcher. The availability of government medical facilities in 11 taluks has been taken into

equal .In Satara district District 1 civil hospital, 2 Sub-District Hospital, 15 Rural hospitals, 72 Primary Health Center, 400 Health sub-center established for the health of the people. The health centers increased according to the growth of population. Never the less, there are some exceptions of Population. In the year 2001 those days hospitals and facilities were less in the district but in the year 2011, the situation was changed. Therefore, Satara district has average availability of government medical facilities. The roots of the primary health center goes to the implementation of Zilla Parishad. This leads to gain an early lead among states to Maharashtra to expand the rural health care infrastructure. The criterion of 1 Primary Health Center for 30000 populations and 1 Sub-center for 5000 population was established firstly by Maharashtra state in the early eight

Introduction

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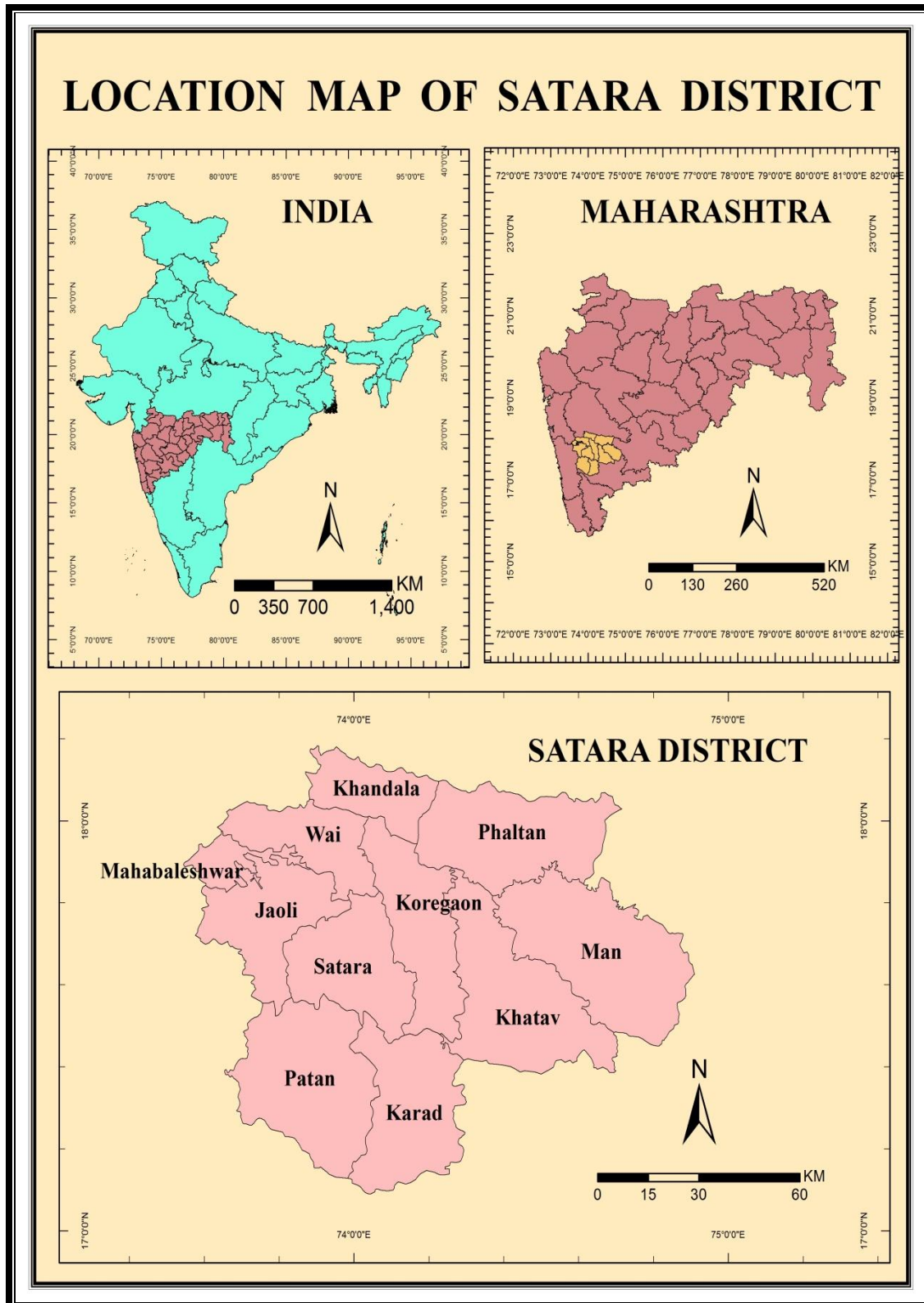
2. Study Region :

Satara district is one of the leading district of Western Maharashtra. It is situated in the western part of the State and lies between north latitudes $17^{\circ} 05'$ and $18^{\circ} 11'$ and east longitude $73^{\circ} 33'$ and $74^{\circ} 54'$. The total area of the district is 10480 sq. km. The district is bounded in the north by Pune district on the east by Solapur district, on the south by Sangli district and on the west by Ratnagiri district of Konkan region. Sahayadri hills of western ghat forms the western boundary, while Nira River forms the northern boundary of the district.

The district having tropical wet and dry climate. Average highest temperature 30.8°c and average lowest temperature is 18.64°c . The average precipitation of the region is 1125.01 inch. Average elevation of the region is 742 metre.

The region present diversified physiographic with hilly region dominated by leeward slopes of western Ghat in west and alternate valleys and ridges culminating gradually in to plateau in the east. The soil varies from literate paths in the west through deep medium block alluvia of the river in the centre and poor gray soil in the east. The monsoon climate dominates the region with variation in heat and cold. The region receives rainfall from south – west monsoon averaging between 5000mm to 200 mm. the eastern parts which fairly fall under rain shadow belt, experiences frequent drought conditions..

Location Map of Study Area



Objective:

1. To study the distribution of medical facilities in study region
2. To know the government health facilities and of study areas

Reserch Methodology:

The research work is based on the primary and secondary data. The primary data is collected through proper sampling, personal interviews and personal correspondence by preparing questionnaire and actual field visit. The secondary data is obtained from socio-economic reviews of the District census handbooks, Gazetteer, district civil surgeons, Sub-district hospitals, District Rural hospital office, district health officer, District Malaria office, District T.B. office, District Aids Control and Prevention Unit and other important offices related to health department. These collected data used through statistical analysis by using percentage, sampling and other statistical devices. To give meaningful analysis to statistical data maps, charts and figures used in this dissertation. The researcher to analyze the data uses the various methods and formulas. The researcher has also used the nearest neighbor method to analyze the distribution of the rural hospitals in Satara district and it is following. Nearest neighbor analysis method formula

Tahsil wise Distribution of Primary Health Centers in Satara District

Primary Health Centers are available at all tahsils and all have 6 bedded. The table shows there are 72 primary health centers in Satara district distributed in 11 tahsils.

Tahsil wise Distribution of Primary Health centers in Satara District

Sr.No	Tashil	Sr.no	Name of Primary Health Center	Available Beds
1	Satara	1	Parali	06
		2	Borgaon	06
		3	limb	06
		4	nagthane	06
		5	Nandgaion	06
		6	Chinchner vandan	06
		7	Thoseghar	06
		8	Shirval	06
		9	Barad	06
2	Wai	1	Bhavdhan	06
		2	Bhuinj	06
		3	kawathe	06
		4	Pachgani	06
3	Khandala	1	Loanand	06
		2	Ahire	06
		3	Kaner	06
4	Koregaon	1	Rahimatpur	06
		2	Kumathe	06
		3	Koregaion	06
		4	Wathar	06
		5	kinhai	06
		6	Ambawade	06

5	Phaltan 06	1	sakarwadi	06
		2	Giravi	06
		3	Bibi	06
		4	taradgaion	06
		5	Barad	06
		6	Rajale	06
6	Man	1	Mhasawad	06
		2	Palpoti	06
		3	Dahiwadi	06
		4	Palashi	06
		5	Jashi	06
7	Khatav	1	Mayani	06
		2	Khatav	06
		3	Nimsod	06
		4	Katkhatav	06
		5	Aundh	06
		6	Discal	06
		7	Pushegaion	06
8	Karad	1	Helgaion	06
		2	Kole	06
		3	Udale	06
		4	Masur	06
		5	Umbarj	06

		6	Indoli	06
		7	kale	06
		8	Rethre	06
		9	Supane	06
		10	Sadashivgad	06
		11	Wadgaon	06
9	Javali	1	Kudal	06
		2	Saygaion	06
		3	Kusumbi	06
		4	Bannoli	06
		5	Medha	06
10	M.shewar	1	Tapola	06
		2	Pachgani	06
		3	Taldev	06
11	Patan	1	Sonwade	06
		2	Kalgaion	06
		3	Chapal	06
		4	Tarle	06
		5	Helba	06
		6	Salave	06
		7	Murud	06
		8	Keral	06
		9	Mahalerpet	06
		10	Morgiri	06
		11	Marali	06

		12	Debewadi	06
		13	Talmavle	06
	Satara District		72	432

Source: District Health Officer, Z.P. Satara

1. SataraTahsil

In Satara tahsil, 9 primary health centers are available. ThosePHCs are Parali, Borgaon, Limb, Nagthane.Nandgaion, Chinchner Vandan, Thoseghar, Shirval, and Barad. Satara tahsil has good availability ofPrimary Health Centers.and near all people of satara tashil district hospital in Satara city.

2 WaiTahsi

Wai tahsil has 4 primary health centers registered. Those areavailable at Bhavdhan, Bhuing, Kawathe, Pachgani. It is hilly tahsil and side of Sahandhri Mountain and Krishna River.The size of this tahsil is small andthat is the reason there are less primary health centers available.

3. KhandalaTahsil

Khandala tahsil has 3 primary health centers serving to thepeople. Those are Loanand, Ahire andKaner. This tahsil also lesspopulated area that is the reason there are less PHCs.

4. KoregaonTahsil

Koregaion tahsil has 6 PHCs available and these are Rahimatpur, Kumathe, Koregaion.Wathar, Kinhai, and Ambawade

5. Phaltan Tahsil

In Phaltan tahsil there are 6 primary health centers availablehowever those consists of Sakarwadi,Giravi,Bibi,Tardgaion,Barad, and Rajale

6. Man Tahsil

Man tahsil has 5 primary health centers available.Those include of MhaswadmPalpoti, Dahiwadi, Palashi and Jashi

7. Khatav Tahsil

In Khatav tahsil, there are 7 PHCs available. Those consist of Mayani, Khatav, Nimsod, katkhatav, Aundh, Discal and pushegaion etc.

8. KaradTahsil

Karad tahsil has 11 primary health centers registered. Those are helgaion, Kole, Undale, Masur, Umbarj, Indoli, Kale, Rethere, Supane Sadashivgad. And Wadgaon

9 Javali Tahsil

In Javali tahsil 5 primary health centers are working however those consists of Kudal, Saygaion, Kusumbi, Bamnoli, and Medha

10. Mahebaleshwar Tahsil

In Mahebaleshwar Tahsil 3 primary health centers are working however those consists of Tapola, pachgani and Taldev

11. Patan Tashil

In Patan tahsil 13 primary health centers are working however those consists of Sonwade, Kalgaion, Chapal, Tarle, Helba, Salave, Murud, Keral, Mahalerpet Morgiri, Marali, Debewadi and Talmavle

Nearest Neighbour Analysis of Primary Health centers of Satara district

The nearest neighbor analysis of Primary Health Center has done by the researcher to know the distance to know the observed difference. It involves the comparison between the mean distance in an area of point from its nearest neighbor and the mean distance which could be expected in a random distribution in the same area. The plant ecologist Clark and Evans (1954) was first to develop this technique and it has been used to measure the patterns of incidence of different spacing of plants. The nearest neighbour analysis method analysis of PHCs in the Satara district it is observed that each PHC has nearest neighbour. There are 72 PHCs available in the district however the area is of 8572 square km. The average distance from 1 PHC to other is of 17.6 km. The regular pattern approaching

uniformity is of 1.76 cm. While some of them consists of clustered and many of them recorded randomly. PHCs are started from Satara tehsil numbered 1 to 72 and ends to Patan tahsil., The second chain of neighbours consists of PHCs from Wai (4) to Karad (25). It is longest chain of neighbours in the study area. The nearest neighbour from Mabelshwar (34) to Patan (35) is little chain of neighbours

Conclusion:

Overall, in present paper the tahsil wise description of health centers variation is noticed however; all tahsils have availability of health centers. The hierarchical distribution of health centers from Ministry of Health and family welfare to PHC level has shown in detail. Some tahsils have more health centers according to the populations. Patan tahsil have highest number of health centers available, Karad tahsil also more health centers available including 11 PHCs, 2 Subdistrict hospital and 1 rural hospital etc. While Mabelshwar tahsil have least health centers available because it is lesser populated tahsil in the district. The PHCs have 6 bedded and RH has 30 bedded and sub district hospitals have 50 bedded.

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