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GEOGRAPHICAL STUDY OF POPULATION PRESSURE ON PRIMARY HEALTH CARE CENTERS IN WALWA TAHSIL OF SANGLI DISTRICT

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ABSTRACT:

Health is one of the most important basic needs of the human being. To maintain and improve the quality and universal access of health care in the country in general and rural area in particular is a major challenge in front of government of India. Primary health care centers are playing very significant role in providing basic health facilities and services. The present research paper attempted to focus on the population pressure on primary health care centers in Walwa tahsil of Sangli district. The study has considered population census data of 2001 and 2011 of Walwa tahsil. Study arrived at conclusion that the population pressure on PHCs has increasing sharply and it has resulted in poor service quality. The population pressure also resulted in law service efficiency from PHCs in the study region and burden on medical staff as well as infrastructure.

Key Words: PHCs, Population Pressure, Population Service Capacity

INTRODUCTION

The quality of health and health care services are the key burring issues in India. PHC is the first drop line between village community and the Medical Officer. It is the responsibility of the PHCs to provide an integrated curative and preventive health care to the rural people with emphasis on preventive and promotive aspects of health care. The PHCs are established and maintained by the State Governments under the Minimum Needs Programme (MNP)/ Basic

Minimum Services (BMS) Programme. There were 24,049 PHCs functioning in the country as on March 2012. There are total 59 PHCs functioning in Sangli District out of which 11 PHCs in the Walwa tahsil. The present research paper humbly attempted to study the population pressure on primary health care centers in Walwa tahsil of Sangli district. The study has considered population census data of 2001 and 2011 of Walwa tahsil.

OBJECTIVES:

The major objectives of the present research work are as below.

1. To study the PHC centers in Walwa Tahsil.
2. To analyzes the population pressure on PHC.

STUDY REGION:

The Study area Walwa Tahsil is one of the economically and culturally developed Tahsil of Sangli district in Maharashtra state. It lies between 16^0 15' N to 17^0 10' N latitude and 24^0 5' E to 24^0 27' E longitude. The total area Walwa Tahsil is 675.25sq.km.that comprising of 96 villages and 2 towns. In Sangli district Walwa Tahsil lies on the west side. It is surrounded by Kadegaon Tahsil in the north, Palus and Miraj Tahsil in the east and Shirala Tahsil in the west. Warna River separates Sangli district from the adjoining Kolhapur district.

The spread of the Tahsil from east to west is about 44.5 km while from north to south is about 30 km. The Kamalbhiran range has significant relief variation from 560 m to above 740 m. Similarly on the western side, the relief various from 620 m to 800 m. The highest elevation at Kille Machindragad (846m) lies towards Northwestern part of this region. In general the slope of the area is from north to south.

METHODOLOGY:

The present research paper is purely based on secondary data. The secondary data have collected district socio-economic abstracts and district census report. All eleven PHCs are selected for present investigation. The population pressure comparison has been made between censes population 2001

and 2011 for all selected PHCs. For the calculation of population pressure index following method has considered.

$$1)\ \text{Population Pressure Index} = \left(\frac{\text{Actual population of PHC}}{\text{Service capacity of PHC}} * 100\right) - 100$$

$$2)\ \text{Growth Rate} = \frac{P1 - P0}{Po} * 100$$

Where's,

GR= Growth rate

P1= Census Population 2011

P0= Census Population 2001

Population Norms of PHCs:

As per the national population norms Primary Health Centre covers a population of 20,000 in hilly, tribal, or difficult areas and 30,000 populations in plain areas with 6 indoor/observation beds. It acts as a referral unit for 6 Sub-Centres and refer out cases to CHC (30 bedded hospital) and higher order public hospitals located at sub-district and district level. PHCs should become a 24 hour facility with nursing facilities. Select PHCs, especially in large blocks where the CHC/FRU is over one hour of journey time away, may be upgraded to provide 24 hour emergency hospital care for a number of conditions by increasing number of Medical Officers, preferably such PHCs should have the same IPHS normsas for a CHC[1].

Situation of PHCs in Sangli District:

As per census 2001, there are ten tahsils and 2822143 lakh population in the Sangli district. Out of the total 28.22 lakh population 21.02 lakh (73.44 percent) lives in rural area and 7.19 lakh (26.56 percent) in urban area. Out of

[1] National Rural Health Mission (NRHM)

the total urban population 72 percents are lives in Sangli, Miraj and Kupwad. There are 59 PHCs functioning in the district for rural population. It means that 73.44 percent (i.e 21.02 lakh) of the total population of the district were depends on the PHCs for the primary health needs and cares.

PHCs wise Population & Growth Rate in Walwa tahsil 2001 and 2011:

The decadal population growth rate during the decade 1991 to 2001 was 13.93, which comes down to 9.18 in decade 2001-2011 in Sangli district. The decadal population growth rates (From 2001 to 2011) of rural and urban area are 8 percent and 14 percent respectively in the district. The population growth rate of the district is 9.24 percent whereas it is 15.99 percent in case of Maharashtra. It means that the growth rate of population is lower than that of Maharashtra.

As per as the Walwa tahsil is concern researcher observed highest decadal population growth rate (from 2001 to 2011) in Bavchi PHCs (i.e 14.47 percent) which has followed by Peth (i.e 13.17 percent) and Yelur (i.e 11.05 percent). The lowest decadal population growth rate has been observed in Borgaon PHCs (i.e -5.31%) followed by Kameri PHCs (i.e -4.69 Percent).

Table 1 PHCs wise Population & Growth Rate in Walwa tahsil in 2001 and 2011

PHC Name	Population 2001	Population 2011	Growth Rate
Bavchi	25231	28884	14.47
Bagani	31125	31022	-0.33
Walwa	28526	30125	5.60
Borgaon	31447	29777	-5.31
Peth	27877	31550	13.17
Kasegaon	30771	30685	-0.27
Nerle	30032	31466	4.77
Kameri	22759	21691	-4.69
Yelur	25555	28380	11.05
Kurlap	42541	43787	2.92
Yede Machchindra	32725	31333	-4.25
Total population	328589	338700	

Source: District Census Report 2001 and 2011.

Figure 1 PHCs wise Population Growth Rate in 2011 of Walwa tahsil

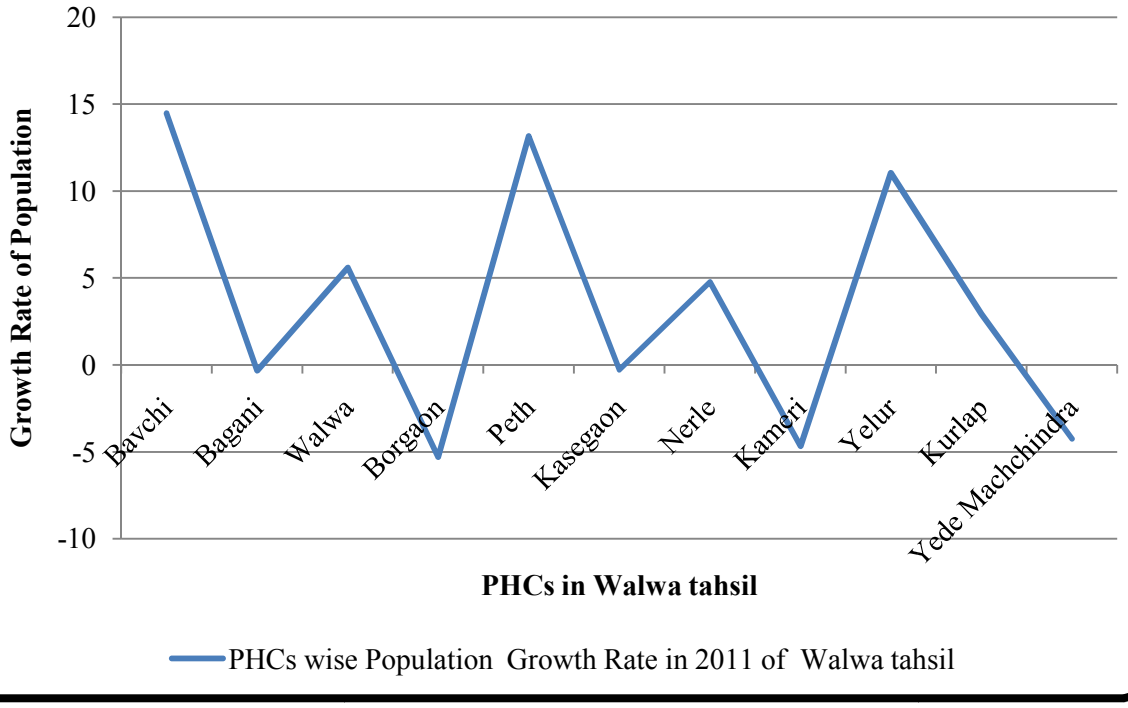

Figure 2 PHCs wise Population in Walwa tahsil

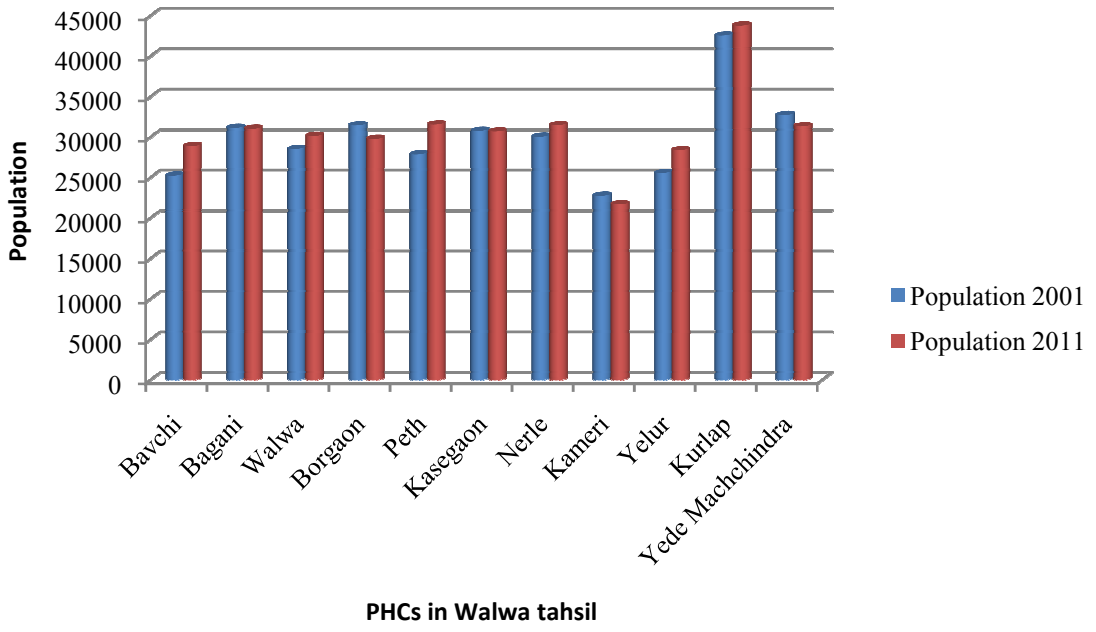

Figure 2 reveals that the highest population size has observed under the Kurlap PHCs in both the census year. On the contrary the lowest population size has been observed under the Kameri PHCs in both the concern census year. The population size of Bavchi, Walwa, Peth, Nerle, Yelur and Kurlap PHCs are significantly increased in the census year 2011.On the contrast the population size of Bagani, Boregaon, Kasegaon, Kameri and Yede Machcindra PHCs are significantly decreased in the census year 2011.

Population Pressure on PHCs in Walwa Tahsil:

The main intention of the present research task is to measure the population pressure on PHCs in Walwa Tahsil of Sangli District. Researcher has measures both population pressure in 2001 and 2011. By taking into consideration the magnitude of the pressure, it has classified into four parts that is as below.

High Pressure (above 18 %)

If the population pressure value is 18 or above 18 then it has considered as high pressure for both the census years.

Medium Pressure (9 to18)

If the population pressure value lie between 9 to 18 percent then it has considered as medium pressure PHCs for both the census years.

Low Pressure (0 to 9)

If the population pressure value lie between 0 to 9 percent then it has considered as low pressure PHCs for both the census years.

Below Pressure (Below 0)

If the population pressure value is less than 0 then it has considered as below pressure PHCs for both the census years the table 2 shows population pressure on PHCs in Walwa Tahsil.

Table 2 Population Pressure on PHCs in Walwa Tahsil

PHC Name	Population 2001	Population Pressure 2001	Population 2011	Population Pressure 2011	Net Change in Pressure in 2001 to 2011	Increased/ Decreased Pressure
Bavchi	25231	-15.9	28884	-3.72	12.17667	Increased
Bagani	31125	3.75	31022	3.4	-0.34333	Decreased
Walwa	28526	-4.92	30125	0.41	5.33	Increased
Borgaon	31447	4.82	29777	-0.75	-5.56667	Decreased
Peth	27877	-7.08	31550	5.16	12.24333	Increased
Kasegaon	30771	2.57	30685	2.28	-0.28667	Decreased
Nerle	30032	0.1	31466	4.88	4.78	Increased
Kameri	22759	-24.14	21691	-27.7	-3.56	Decrease
Yelur	25555	-14.82	28380	-5.4	9.416667	Increased
Kurlap	42541	41.8	43787	45.95	4.153333	Increased
Yede Machchindra	32725	9.8	31333	4.44	-4.64	Decrease

Source: District Census Report 2001 and 2011. (Pressure has computed)

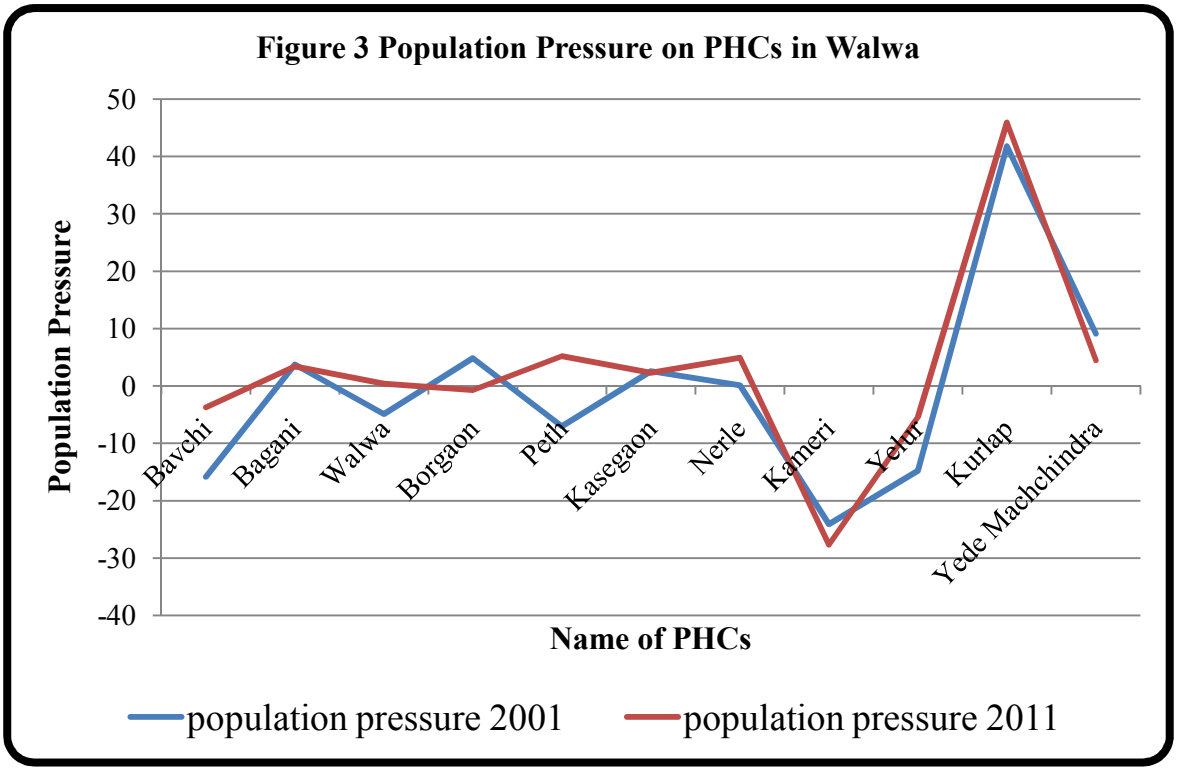
Figure 3 Population Pressure on PHCs in Walwa
Population Pressure
50
40
30
20
10
0
-10
-20
-30
-40
Bavchi
Bagani
Walwa
Borgaon
Peth
Kasegaon
Nerle
Kameri
Yelur
Kurlap
Yede Machchindra
Name of PHCs
population pressure 2001
population pressure 2011

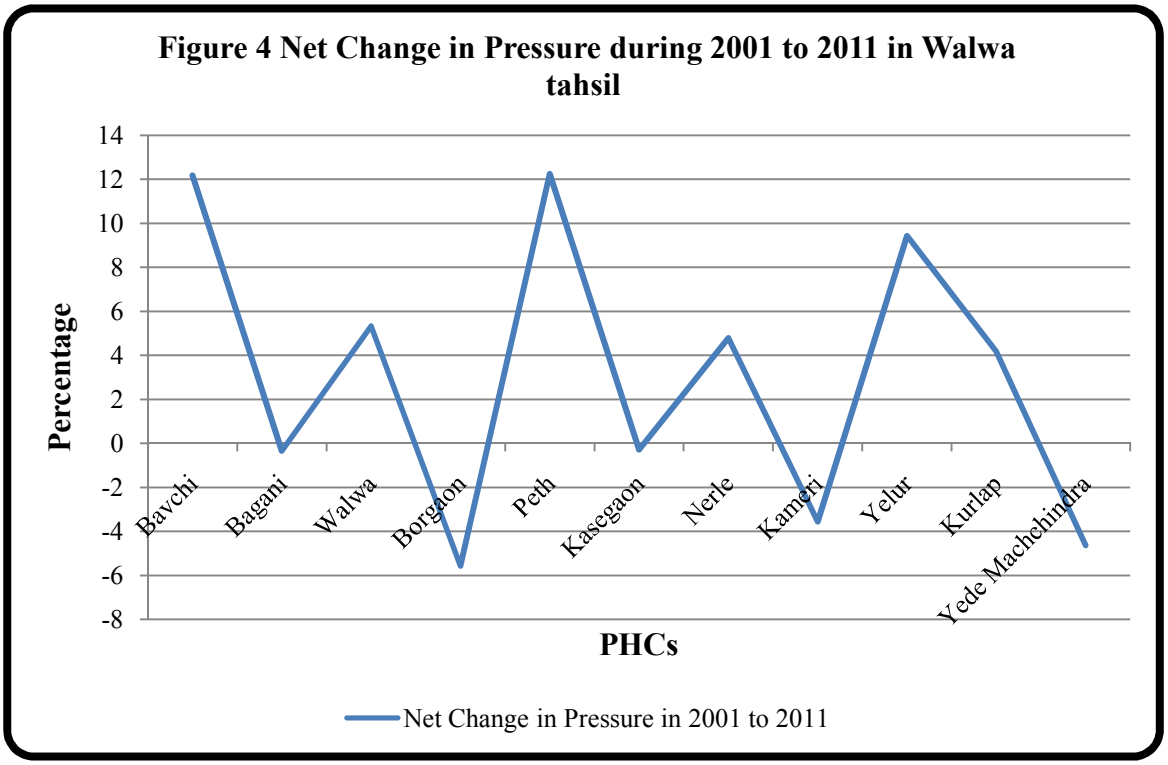
Figure 4 Net Change in Pressure during 2001 to 2011 in Walwa tahsil
Percentage
14
12
10
8
6
4
2
0
-2
-4
-6
-8
Bavchi
Bagani
Walwa
Borgaon
Peth
Kasegaon
Nerle
Kameri
Yelur
Kurlap
Yede Machchindra
PHCs
Net Change in Pressure in 2001 to 2011

Based on table 2, figure 3 and 4 following table 3 has been prepared.

Table 3 Census 2001 and 2011Comparative Pressure Positions of PHCs

Level of Pressure	Census Year 2001	Position Changing	Census Year 2011
High Pressure PHCs	Kuralap	→	Kuralap
Medium Pressure PHCs	Yede Machindra		……
Low Pressure PHCs	Bagni,	→	Bagni,
	Borgaon,		Walwa,
	Kasegaon,	→	Kasegaon,
	Nerle	→	Nerle,
	…..		Peth,
	……		Yede Machindra
Below Pressure PHCs	Bavchi,	→	Bavchi
	Walwa,		Borgaon,
	Kameri	→	Kameri,
	Yelur	→	Yelur,
	Peth,		……

The comparative pressure position of selected PHCs of Walwa tahsil has been presented in table 3. It has been seen from the table that the population pressure of Walwa and Peth PHCs have been increasing smoothly as these PHCs shifted from below pressure category to low pressure category in 2011. However these two PHCs are still falls under the low-pressure category. The population pressure on Boargaon PHCs is sharply declining as it is shifted from low pressure category into below pressure category in 2011. The population pressure

on Yede Machindra is also declining as it has shifted from medium pressure category to low pressure category. It has also found that the population pressure on PHCs is remains high in case of Kuralap PHC in both the census year. The low population pressure position of Bagani, Kasegaon and Nerle has been observed in both the census year. It means the pressure level of these PHCs remain constant. The below population pressure position of Yelur, Kameri and Bavchi has been observed in both the census year. It means the pressure level of these PHCs remain constant

CONCLUSION:

There should low population pressure on the PHCs, in order to provide qualitative and efficient primary medical services to the rural people. In fact in an average researcher has observed low population pressure on PHCs in Walwa tahsil. However, taking into consideration long period the pressure will have increasing trend. Hence, it has been suggested that there is an urgent need of long term policy measures for reducing increasing population pressure in near future.

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