CHAPTER - V

ANALYSIS OF HEALTH CARE SYSTEMS IN PUNE DIVISION

5.1 INTRODUCTION :

The study of localization of health care facilities is the integral part of Medical Geography. It is apart from the study of distribution diseases which was focal theme of traditional medical geography. As the medical geography deals with the medical phenomenon in relation to place, the study of localization of medical services may be the focal study of medical geography.

The health services may be analysised in terms of the community for which they serve and health concern they deal with. These services are the integral part of a particular health system and represent responses to health concern and to the health needs. But it has been found out that localization of health services are not examined by relating them to the community to which they serve and hence unequal distribution of medical facilities are observed in any region (Pandurkar, 1981).

The researcher has attempted to analyse the existing health care systems of Pune division in this chapter. Taking into consideration the volume of population of district the availability of medical services has to be studied.

Some field work has been done by the researcher by selecting the sample villages, where the PHCs are located

in Pune division. The researcher has collected the data about number of deaths and cases of illness by certain diseases occuring in different PHCs of Pune division.

5.2 AVAILABILITY OF MEDICAL SERVICES IN MAHARASHTRA STATE :

The availability of medical services was very poor in early 20th century in Maharashtra state. Most of the medical facilities were available only in the major cities of Maharashtra before 1960. The rural areas were suffering from major epidemics where the infant mortality rates were also very high. Cities were always in surplus facilities and villages were indeficit. Availability of medical aids at appropriate time was very rare in rural areas. Health education and knowledge of basic sanitation were rarely found amongst the villagers. There were hardly any qualified medical personnel available in rural areas. Even today, medical facilities are unevenly distributed, although medical facilities in the state are above national averages.

In Maharashtra, during the first decade of this century, the missionaries have worked for improving the health status of the people. But the work of missionaries was restricted to small groups of people which were mainly located in urban and suburban centres like Bombay, Pune, Miraj, Amraoti, Kolhapur and Nagpur.

Government of India has appointed a committee called the 'Health Survey and Development Committee' under a Chairmanship of 'Sir Joseph Bhore' for systematic and planned efforts for improving the status of medical services in the rural areas. According to the recommendations of the 'Bhore Committee', Government of Maharashtra has introduced the Public Health Centres (P.H.C.), Public Health Units (P.H.U.) and sub-centres and subsidised medical practioners in the rural areas of Maharashtra.

5.3 DISTRIBUTIONAL PATTERN OF MEDICAL SERVICES IN PUNE DIVISION :

5.3.1 Methodology :

In the context of health planning, the author in this chapter, proposes to examine the status of medical facilities in the Pune division. The study of present status of medical facilities is based on the 1961, 1971, 1974 and 1975 health statistics. For this study by collecting the data of medical establishments the number of surplus and defecit beds have been calculated.

5.3.2 Workload factor :

The medical facilities available in the division are generally below the state average. They are unevenly distributed in the division. An attempt has been made to

examine the districtwise disparities in the medical facilities by considering the workload factor and other ratios. The hospital workload is calculated by the following formula -

$$WL = \frac{\text{Population served in '00s}}{\text{General use in patients beds}}$$

(McGlashan,1972)

5.3.3 Districtwise distribution of beds :

The districtwise number of existing beds are taken into consideration for 1961, 1971, 1974 and 1975. Number of beds available in the district of Pune division can be used as a yardstick to measure the intensity of availability of health facilities.

With considering the Bhore norms (1:1000), how many beds are actually required to serve the population have been calculated for Pune division as a whole and also separately for each district. It is found out that (Fig.5.1 and Table 5.1) whatever total beds are actually existing in Pune division are more than the required beds per Bhore norms. Divisional figures shows surplus beds than the norms i.e. + 1592 (1971), + 847 (1974) and + 1540 (1975).

The actual fact indicates that they are not distributed proportionally to the population in the division.

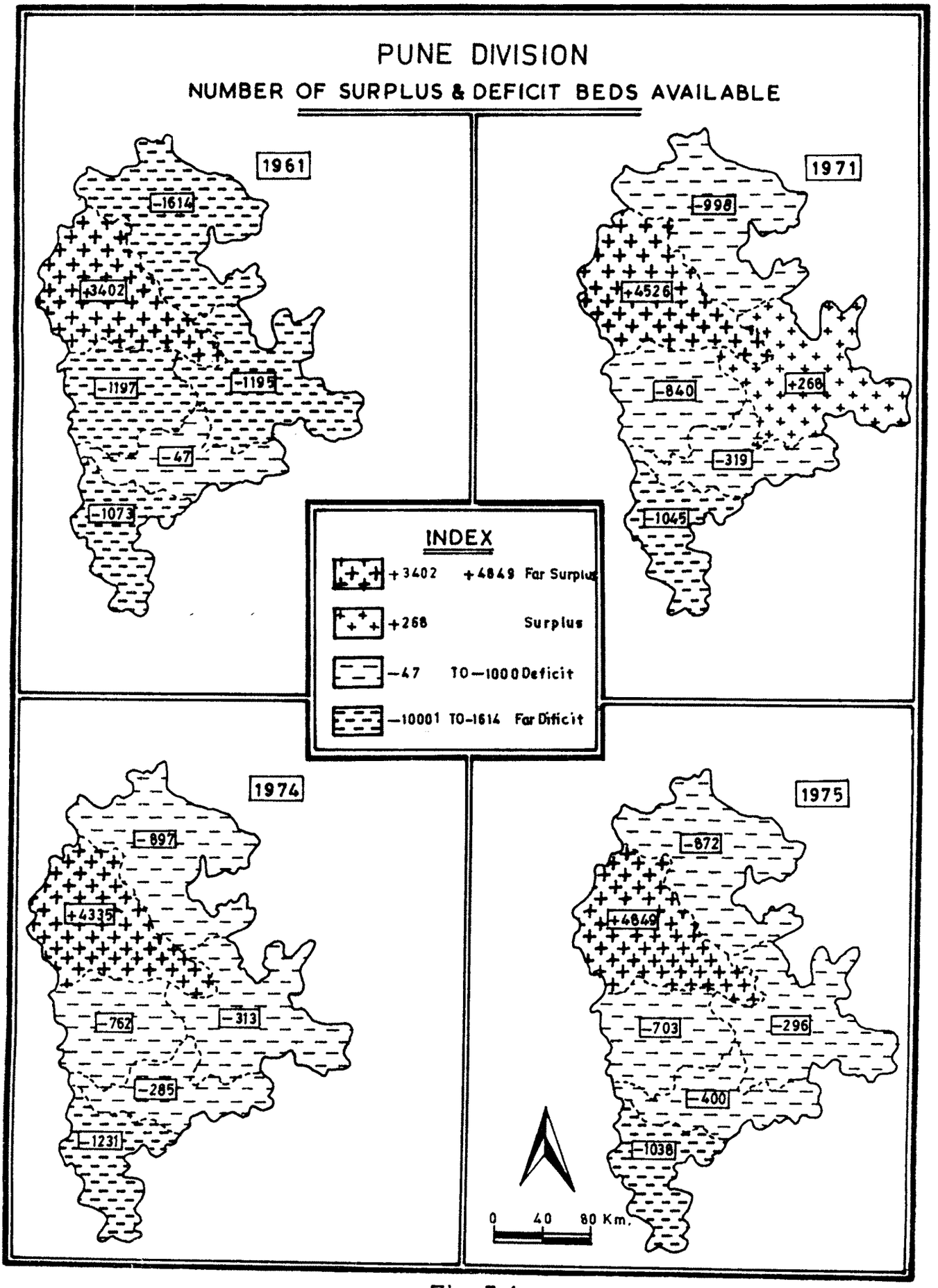
PUNE DIVISION
NUMBER OF SURPLUS & DEFICIT BEDS AVAILABLE
1961
-1614
+3402
-1197
-1195
-47
-1073
1971
-998
+4526
-840
+268
-319
-1045
INDEX
+3402 +4849 For Surplus
+268 Surplus
-47 TO -1000 Deficit
-1000 TO-1614 For Dificit
1974
-897
+4335
-762
-313
-285
-1231
1975
-872
+4849
-703
-296
-400
-1038
0 40 80 Km.

Fig. 5·1

TABLE 5.1 : Pune division - Availability of medical facilities.

District	Number of existing beds	Number of required beds if the existing beds are distributed as per population (expected beds)	Difference between existing beds and expected beds (Col.2-3)	Number of required beds as per Bhore norms (Bhore norm 1:1000)	Number of Deficit/ surplus beds as per Bhore norms (Col.2-5)
1	2	3	4	5	6
1975 YEAR					
Ahmednagar	1,659	2,802	- 1,143	2,531	- 872
Kolhapur	1,251	2,534	- 1,283	2,289	- 1,038
Pune	8,409	3,940	- 4,469	3,560	+ 4,849
Sangli	1,301	1,883	- 582	1,701	- 400
Satara	1,173	2,076	- 903	1,876	- 703
Solapur	2,156	2,714	- 558	2,452	- 296
Divisional Total	15,949	15,949	0	14,409	+ 1,540

SOURCE : Compiled by Author, based on Health Establishment Maharashtra State, Pune.

It is clearly stated that the beds are mainly concentrated in the urban areas particularly in Pune district or it can also be suggested that the norms for the other districts like Ahmednagar, Kolhapur, Sangli, Satara and Solapur must be different than those for the urban Pune district.

In 1975 as per Bhore norms, the Pune division was having 1540 surplus beds. Even the existing beds were not distributed evenly. The beds were concentrated mainly in urban areas of Pune district. The Table clearly shows that the districts like Ahmednagar, Kolhapur, Sangli, Satara and Solapur are indefecit of the beds than their requirements.

The Pune division as a whole have sufficient beds available hence with considering this, the available beds are distributed per population, how many beds are required (expected) per district and how many are actually available. These figures were calculated. The difference between expe-cted beds and existing beds was also calculated and is shown with the help of choropleth in Fig.5.1. In Pune division as a whole in 1961, there is only one district where the beds are surplus i.e. more than what they are needed, that is Pune. While in the rest of five districts, the beds are deficit especially the Ahmednagar district has highest defecit beds in the division i.e. - 1614. Secondly Satara and Solapur districts have higher deficit beds in the division i.e. - 1197, and - 1195 respectively. Kolhapur district has moderate deficit

beds in the division i.e. - 1073. These four districts need greater attention for improving the bed facilities. The Sangli district has less deficit beds in Pune division i.e. - 47.

In 1971, there are two districts where the beds are surplus in Pune division, these are Pune and Solapur districts i.e. + 4526 and + 268 respectively. There is only one district where the beds are in highest deficit i.e. Kolhapur district (-1045). Ahmednagar, Sangli and Satara districts are having less deficits in Pune division. In 1974 and 1975, only Pune district has highest surplus beds in the division, i.e. +4335 and +4849 respectively. While in the rest of five districts, the beds are in deficit in the division. The above analysis suggests that the Pune district is the only one district where the beds are in surplus in the division. Kolhapur district has highest deficit beds in the division. Ahmednagar, Sangli, Satara and Solapur have less deficit beds in the Pune division in 1974 and 1975.

5.4 SAMPLE SURVEY :

For understanding the existing conditions of health status of the people residing in the rural area of this division, the researcher has undertaken the extensive field work of the six PHCs, which are located in the villages in

Pune division. This field work has arranged with the help of interview schedules with the patients visiting the different PHCs located in Pune division. These interviews were conducted personally by the researcher with visiting six PHCs with the help of questionnaire as shown in Appendix - I, II and III. The data of Questionnaire No.1 have been collected with interviewing the Doctors of PHCs namely Bhose, Kavalapur, Manerajuri, Mohol, Kamati and Jaysingpur. Questionnaire No.2 was prepared for the patients visiting the PHC from the nearby villages. The Questionnaire No.3 was prepared for the patients visiting the PHC for the treatment from the same village where the PHC is located. Totally 180 patients, were interviewed by the researcher.

5.4.1 Questionnaire No.1 :

For studying the day to day administration and work conducted at PHC, the researcher has conducted the interviews with the incharge doctor of six PHCs with the help of Questionnaire as shown in Appendix - I (Questionnaire No.1). The findings of these interviews are listed below. At present 10 doctors are serving at six PHCs selected for the study. It is true that due to less availability of doctors, there is a high pressure of patients on each doctor. They could not give the full justice to patients who are suffering by different diseases. It has been found out that generally

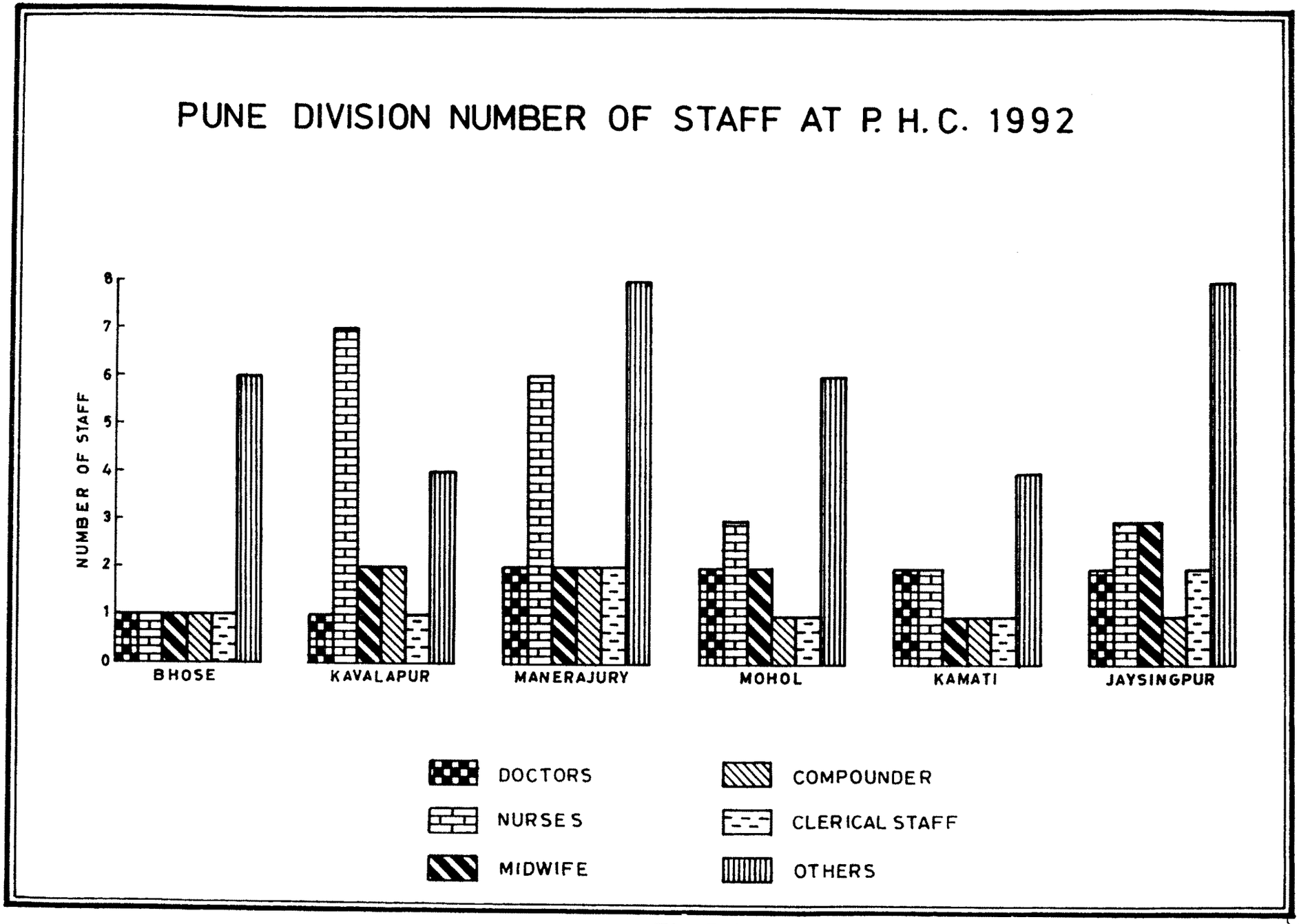
PUNE DIVISION NUMBER OF STAFF AT P. H. C. 1992
NUMBER OF STAFF
0
1
2
3
4
5
6
7
8
BHOSE
KAVALAPUR
MANERAJURY
MOHOL
KAMATI
JAYSINGPUR
DOCTORS
NURSES
MIDWIFE
COMPOUNDER
CLERICAL STAFF
OTHERS

Fig. 5·2

40 to 50 patients visit the PHC everyday. These PHCs are also not well equipped as only 65 beds are available. It is interesting to note that eventhough the PHC are established for the services, the whole rural population residing in the taluka, more than 40% patients are visiting the PHCs daily from the same villages, where that PHC is located. Thirtyfive percent patients are coming from the nearby villages within a radius of 20 kms. The majority of the PHCs are not well equipped with special medical equipments.

5.4.2 Questionnaire No.2 :

Questionnaire No.2 is related with the patients visiting the PHC from nearby villages. The researcher has asked questions to the patient (Refer Q.No.2). The researcher has interviewed 82 patients visiting the PHC who are the resident of nearby villages. The PHCwise number of interviews conducted were as follows :-

i) Bhose (5 patients), ii) Kavalapur (17 patients), iii) Manerajuri (21 patients) iv) Mohol (13 patients), v) Kamati (10 patients) and vi) Jayasingpur (16 patients). Out of 82 respondants, 40 were male and remaining 42 were female. There are 50 percent (41 respondant) patients who the agriculturalist while remaining 50 percent are engaged in secondary and tertiary activities. The researcher has

PUNE DIVISION

SAMPLE SURVEY BASED ON QUESTIONNIARY NO.2

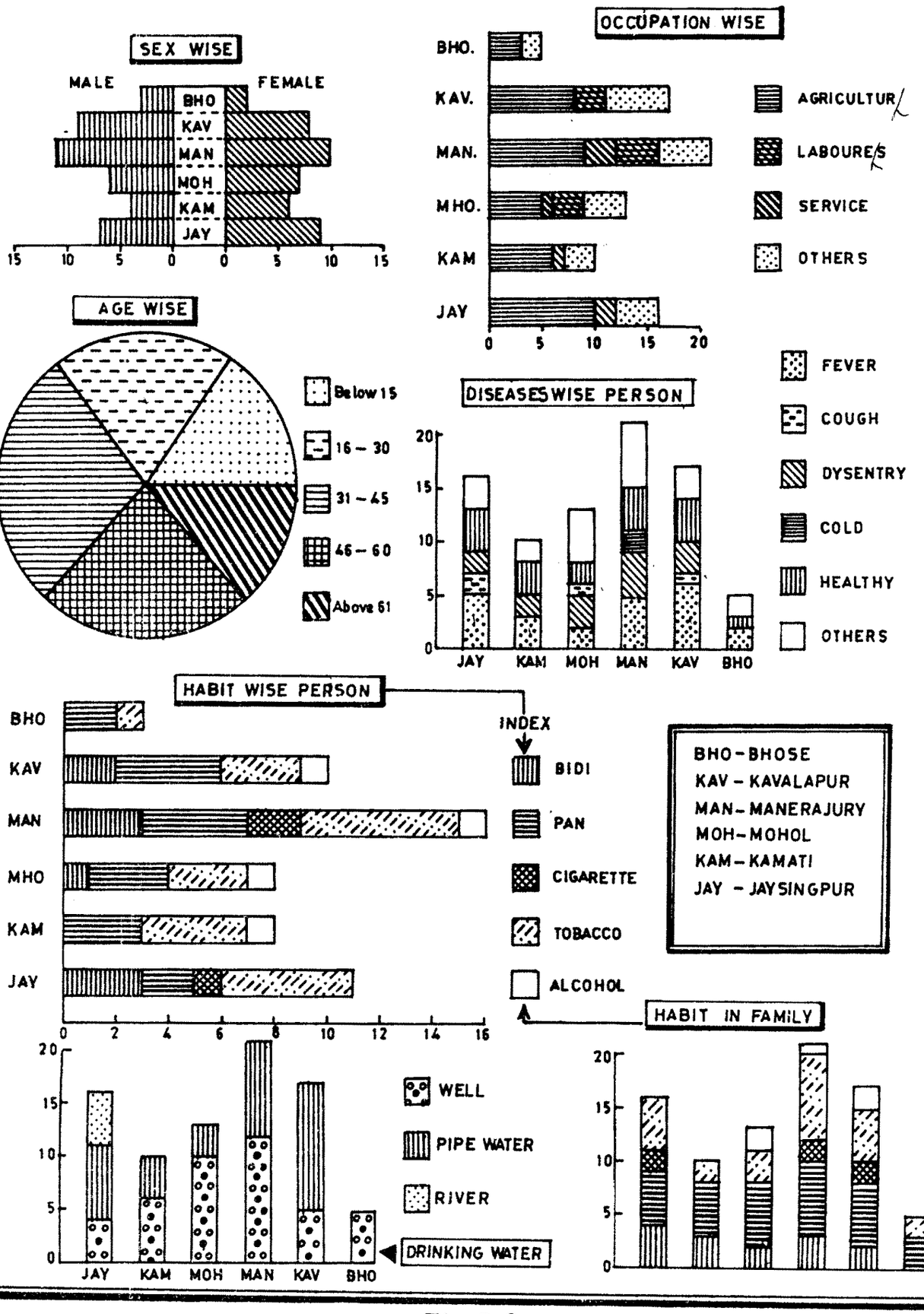

Fig. 5·3

has found out that, some 52 respondents were of age below 45 years, while 11 respondents were above the age of 60 years. It clearly indicates that the distance inbetween PHC and village of residence is the important factor as old people visit the PHC very rarely.

It is surprising to note that for getting a simple curing medicine, the patients have to travel upto a distance of 20 kms to the PHC. Out of 82 patients, some 23 have to travel more than 25 kms distance to reach PHC. Being a large distance inbetween, more than 65 percent patients travel it by S.T., while remaining use the bicycle or prefer to walk. Eventhough the people are of low economic group, they have to spend the money on travel to get a free treatment at PHC. This distant travel factor must be taken into consideration while planning new PHCs in the future. The researcher has collected the information about the cause of disease from which they were suffering. It has been found out that majority of patients were suffering from either the diseases of respiratory system like cold, cough, or the disease of digestive system like dysentery or other diseases like headache and teethache. Out of 82 patients, 7 were suffering from cold and cough diseases, 21 were suffering

from fever, 14 were suffering from dysentery and remaining were suffering from other diseases. Simple cold and cough, fever, headache and dysentery seem to be the major cause of illness in the survey area. Being a large distance inbetween, 58 patients visit the PHC once in a month, while remaining visit two or three times a month. Most of the patients get the diseases during the rainy season.

This frequency of visits to PHC seem to be very small as the distance is more. To get the prompt and effective treatment, patient has to visit the PHC at least 3 to 5 days but because of long distance and money required to be spent on travel, they could not visit the PHC frequently. This problem could be solved if the distance inbetween the PHC and the patient is less.

The diet chart of the patients shows that, they consume carbohydrates in more quantity than proteins. The use of minerals and vitamins in the form of leafy and other vegetables is meager. Rice is the common dish for lunch and dinner. Seventy percent respondents consume non-vegetarian food in the form of fish and meat very rarely. Due to this, undernourishment might be affecting the health of adults and children as well. Eventhough the respondents have mentioned about different habits for which they are acustomsed to, the five major habits have been found out

i) wine ii) bidi iii) tobacco chewing iv) pan and v) cigarette. River and well water are the major sources of drinking water but majority of the respondents consume the unfiltered water even in rainy season. This might be leading towards increase in number of waterborne diseases and diseases associated with digestive systems.

5.4.3 Questionnaire No.3 :

The sample cases of the patients visiting the PHC from the same village where the PHC is located are tested with the help of Questionnaire No.3 (Appendix - III). The researcher has interviewed 100 patients of the following PHCs i) Bhose (11 cases) ii) Kavalapur (18 cases) iii) Manerajuri (25 cases) iv) Mohol (14 cases) v) Kamati (12 cases) and vi) Jayasingpur (20 cases).

Out of 100 respondents, 49 were male and remaining 51 were female (Fig.5.3). Nearly 55% were the agriculturist while remaining 45% were in secondary and tertiary activities. Out of 100 respondents, 75 are of age below 45 years while only 25 respondents are of age above 46. The people are generally of low economic group.

The researcher has found out that fever is of highest rank amongst the villagers. It is followed by dysentery, cold and cough. The major notable disease by which other persons

PUNE DIVISION

SAMPLE SURVEY BASED ON QUESTIONNIARY No.-3

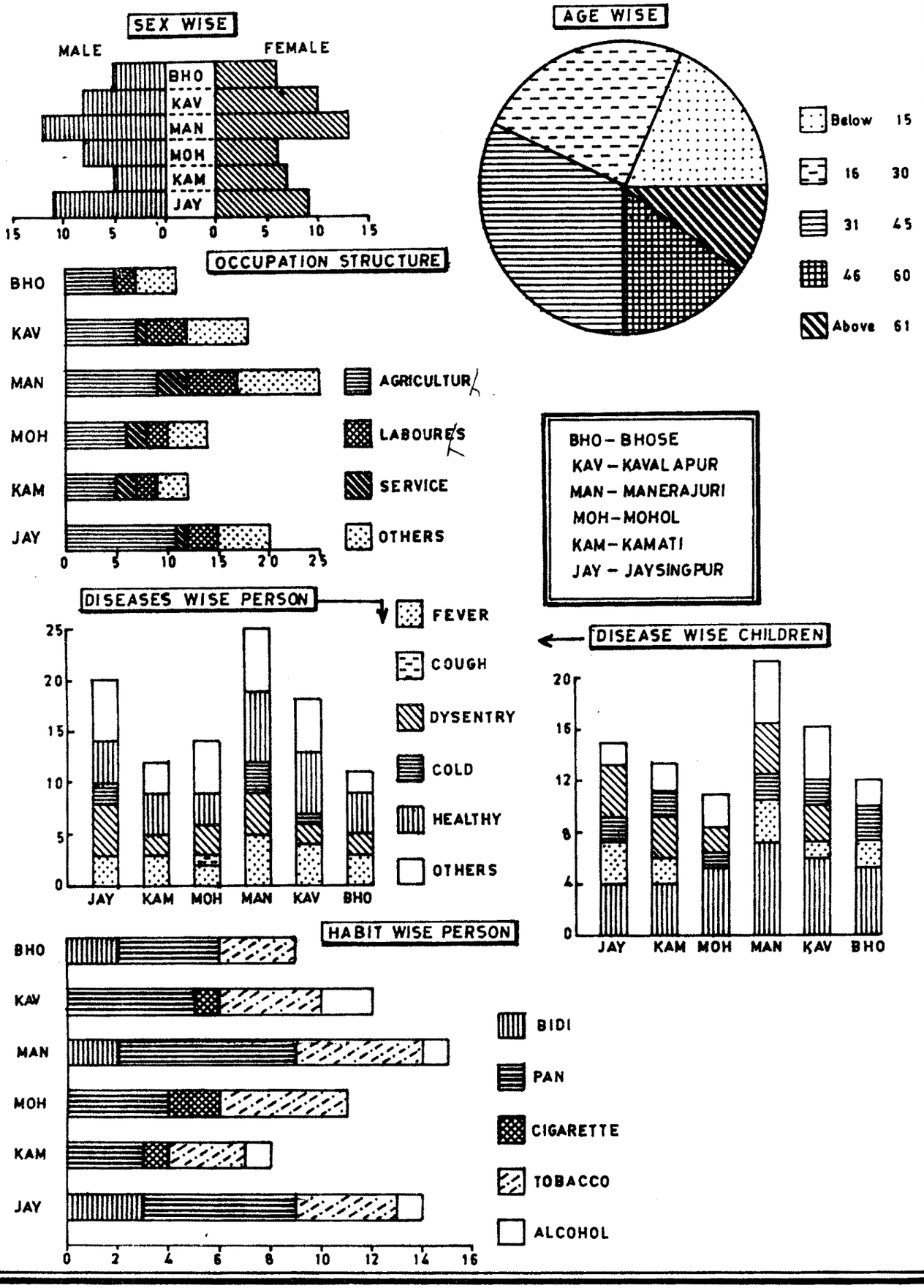

Fig. 5·4

of their family were suffering in the previous year of interview were cancer, T.B., pneumonia etc. The children below the age of 15 were suffering from common cold, fever, dysentery, cough, measles etc. It has found out that fever and common cold are the diseases which occur mainly in rainy season.

As the PHC is located in the same village of residence, all the 100 respondents have stated that during common illness they use to take medical aid from the PHC. Eventhough in some of the villages, private medical aids (by private doctors) are available, 62 have stated that they take medicines from private doctors, but 38 respondents have stated that they do not take medicines by private doctors. It might be because of non-availability of money at the time of illness. In most of the villages, the medical shops are located due to which medicines prescribed by the doctors are readily available in the same village. The findings about diet, habits and drinking water facilities of these respondents are same as those interviewed according to Questionnaire No.2.

5.4.4 Findings in General :

The villagers are economically backward and coming from large size family, could not offer to opt any other medical aid than the primary health centre's treatment,

where it is given free of cost. Due to this, they offer to walk even 15 to 20 kms to get this free medical services. The time and distance factor is important hinderance behind the increase in morbidity and mortality rates of diseases in the villages. Due to shortage of money, these villagers could not offer to take medicines from any other sources. The cold, cough, fever and digestive disorders are some prevalent diseases found in this sample survey. The use of unpurified and unfiltered water might be one of the reasons behind the large incidences of waterborne diseases. The undernutrition is the major factor associated with number of deficiency diseases amongst the people. The availability of medical aid at free cost in the village of their residence may solve some of the problems associated with the health of villagers of this region.

5.5 CONCLUSION :

Medical facilities are relatively better in Maharashtra as compared to other states of India. The specialised services like special tuberculosis, cancer and leprosy hospitals are also in sufficient number but the distribution of these facilities is uneven. These inferences of Maharashtra state also tallies with the Pune division. The people who live in big cities receive more medical facilities than their reasonable share. Lion's share of medical services has been taken by Pune district

and very less is served to other districts of division. Majority of villagers have to rush to adjoining cities for simple treatment. The diseases like dysentery and diarrhoea are found in its epidemic form in the villages of the Pune division. Villagers are poorly served by medical facilities. It is necessary to give more attention on the rural population of each district.

In the rural areas of study region, the PHCs are unevenly distributed. The patients visiting the PHCs are from low economic group and hence they are more dependent on free treatment available at PHC. For this, they walk even upto 20 kms to reach the health centres. During rainy season, the morbidity rates are high due to cough, cold and digestive disorders. The diet is non-nutritive and lack in quality and quantity as well.

The people residing in cities get better treatment. The PHCs, eventhough they are marginally sufficient, remain beyond the reach of majority, hence benefitted by smaller group of population. Poor sanitation, poor nutrition and unsafe drinking water are the major health problems of the people of this region.

R E F E R E N C E S

1. Health Establishment (1961,1971,1974, and 1975) : Health Establishment in Maharashtra, Health services, Govt. of Maharashtra.

2. McGlashan, N.D. (1972) : Medical Geography - Technique and field studies. Matheu and Co., London.

3. Pandurkar, R.G. (1981) : Spatial distribution of some diseases in Maharashtra - A study in Medical Geography. Unpublished Ph.D. Thesis, Shivaji University, Kolhapur, p.266, 270, 274.
