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KUMUDINI DANDEKAR

DEMOGRAPHIC
SURVEY OF
SIX RURAL
COMMUNITIES

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GOKHALE INSTITUTE STUDIES

SURVEY OF FERTILITY AND
MORTALITY IN POONA DISTRICT

V. M. DANDEKAR AND
KUMUDINI DANDEKAR

This study contains an analysis of survey data on births and deaths, knowledge and use of family planning and limitation and attitudes towards reproduction. The material is derived from a sample of about 1,000 families located in Poona city, and another sample of 1,000 families from the non-city area of Poona district.

Rs. 5.00

FERTILITY SURVEY OF NASIK,
KOLABA AND SATARA (NORTH)
DISTRICTS

N. V. SOVANI AND
KUMUDINI DANDEKAR

This study is an analysis of material collected in the demographic inquiries among the urban and rural populations of these districts. Together with the usual demographic data regarding fertility, a probe has been made into various biological and socio-economic factors that are likely to affect fertility. An assessment of attitudes of people towards family planning and contraception is another important feature of the study.

Rs. 6.00

BY THE SAME AUTHOR

*Survey of Fertility and Mortality
in Poona District*

*Fertility Survey of Nasik
Kolaba and N. Satara districts*

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FOREWORD

This publication represents the third and the final report relating to a series of rural demographic investigations undertaken by the Institute between 1951 and 1956. The approach and procedures in all this investigational work were, in the main, similar. However, the investigation, the report of which is contained in this publication, was planned somewhat differently. For example, the areas surveyed were chosen on a different basis in the present project. Instead of a number of sample units chosen from a relatively small area being studied, as in the former investigations, a number of centres scattered over a wide tract were deliberately selected for this project. Differences in geographic, economic, etc. factors are, on this account, fairly sharply brought out in this publication. At the same time the varied backgrounds and situations of the centres surveyed, emphasize the many common features of the basic demographic situation in the country.

In addition to the wider area over which the present investigation was conducted, the scope of the enquiry was itself wider than in the earlier investigations. Instead of being confined to the demographic aspects, the enquiry covered many related socio-economic fields also. The demographic aspects covered in this publication are broadly the same as those of the two earlier ones. The results of enquiry are also very similar. In relation to fertility, for example, the conclusion is that the level seems to have remained more or less unchanged in recent years. This is also the conclusion of the earlier investigations; and in common with those investigations, there appeared in this investigation also some evidence, at some of the centres, of a certain decline in fertility in recent years.

Another important respect in which the findings of this investigation confirm the results of the earlier investigations is in relation to attitudes towards family planning. Here again, the remarkable feature arising out of these investigations is the lack of any strongly rooted opposition to the concept of family planning or the procedures in relation to it. It is noticeable that the presumed backwardness of an area or a people, e.g. the Bhils, did not seem to affect significantly the general attitudes towards family planning. Because of the difficulties faced in the earlier investigations, we took special precautions, in this investigation in the conduct of the enquiry into these attitudes. We employed for this work trained nurses and health visitors, who had received training in family planning methods. We also permitted them to practise

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CHAPTER I

INTRODUCTORY

The Demographic Studies Sub-Committee of the Family Planning Research and Programmes Committee of the Planning Commission, Government of India, at its meeting on 23rd and 24th May 1954, decided to invite suitable schemes of research on the subject. Accordingly, the Section in Demography of the Institute submitted a scheme of investigations with the following objects: (i) to obtain basic demographic data necessary to compute fertility rates and if possible also mortality rates for a sample of rural localities; (ii) to collect information regarding socio-economic determinants, if any, of these rates, and (iii) to assess the present attitudes towards family planning in general and in favourable cases to assess the acceptability and suitability of different contraceptive methods and means. It was proposed that the investigations would be conducted in six rural centres in six districts, four of Bombay State and two of Hyderabad State.

The districts chosen for the purpose were West Khandesh, Ahmednagar, Ratnagiri and Belgaum from the then Bombay State and Parbhani and Gulbarga from the then Hyderabad State. Of these, West Khandesh, Ahmednagar, Ratnagiri and Parbhani are now included in the reorganised Bombay State and Belgaum and Gulbarga are included in the reorganised Mysore State. In each of these districts, a centre comprising a nuclear large village together with a few neighbouring small villages was chosen for the purpose of the proposed investigation. These centres were the same as those in which the investigations of the Agricultural Economic Section of the Institute were in progress during the year. The Agricultural Economic Section has chosen them as representing different socio-economic types. They also seemed suitable for the purpose of the proposed demographic investigation. The choice also made it possible to plan the socio-economic and the demographic investigations on a mutually complementary basis. In Table 1.1 are given particulars of the centres covered by the investigation. It will be seen that the six centres comprised a total of 26 villages with a total population of 37,935. It was intended that at each centre there should be between 1200 to 1500 households to investigate. The neighbouring smaller villages were added to the nuclear large village with this intention. In Ratnagiri, the nuclear large village was large enough and hence no adjoining villages were added. In Belgaum, the lady investigator had to be given leave on medical grounds during the course of the investigation. The adjoining villages were therefore omitted and the investigation was confined only to the nuclear village.

TABLE No. 1.1.

Particulars of the centres covered by investigation.

District	Name of the village	No. of households	Population		
			Total	Male	Female
PARBHANI	1. Bori	710	3397	1687	1710
	2. Dhanora	91	383	204	179
	3. Nagapur	27	106	53	53
	4. Deogaon	70	294	143	151
	5. Mudha	67	309	155	154
	6. Nagthana	21	124	58	66
	7. Ganpur	34	150	70	80
	8. Dohara	114	563	300	263
	9. Chandaj	151	746	388	358
	Total	1285	6072	3058	3014
WEST KHANDESH	1. Dhanore	690	3963	1950	2013
	2. Mangrul	50	281	141	140
	3. Karanjve	44	247	142	105
	4. Lakhmikhede	111	644	306	338
	5. Khodade	133	779	385	394
	6. Arditara	86	471	232	239
	7. Borade	106	592	302	290
	8. Adade	97	542	281	261
	Total	1317	7519	3739	3780
AHMEDNAGAR	1. Mirajgaon	806	4467	2218	2249
	2. Gondardi	23	128	67	61
	3. Diksal	86	543	283	260
	4. Guravpimpri	297	1555	792	763
	Total	1212	6693	3360	3338
RATNAGIRI	1. Mithbaon	1130	5140	2243	2897
BELGAUM	1. Mudalgi	840	4530	2256	2274
GULBARGA	1. Nalwar	1321	6363	3112	3251
	2. Soogury	249	1096	543	553
	3. Kalkanda	109	522	246	276
	Total	1679	7981	3901	4080
TOTAL		7463	37935	18557	19378

It was mentioned that the six centres were chosen to represent different socio-economic conditions. General notes on the villages comprising these centres are given in the next chapter.

The investigation was done by lady investigators specially recruited for the purpose. They were all trained nurses and health visitors. Besides, they were given a month's training in investigational methods and interview techniques and a two week's training in the family planning clinics of the Poona Corporation. During the entire period of investigation, nearly a whole year, they stayed in the nuclear villages of their respective centres. One of the reasons for choosing the same villages as chosen by the Agricultural Economic Section of the Institute was that one male investigator of that Section also stayed at each of these centres during the course of the year. This proved useful from the standpoint of the convenience and personal security of the lady investigators. The lady investigators were also given local assistants, one at each centre. These local assistants were young men educated upto the 7th primary standard. They helped the lady investigators in establishing contacts with the villagers, accompanied them on their visits to the households and escorted them to the neighbouring villages. They also helped to a certain extent in filling the questionnaire schedules, particularly those items which were addressed to the male members of the households.

The investigation was broadly divided into two stages. In the first stage, a general questionnaire called the 'General Family Schedule' was filled in respect of every household in the nuclear as well as the neighbouring selected villages. This covered details regarding family size and particulars of age, education, marital status, earning status, occupations and earnings of each member of the household. Particulars regarding disabilities and illnesses experienced during the course of a year were also obtained. The questionnaire is given in full in the appendix to this chapter.

Besides providing the necessary general background information, the filling of the General Family Schedule also helped in establishing contacts with the families. This took nearly six months. During this period, the lady investigators, as they were trained nurses, were permitted or in fact encouraged to do midwifery practice in the selected or the neighbouring villages. This had a salutary effect in establishing goodwill. The investigators were therefore in a position to undertake the more detailed investigations covered in the next stage. Because of the time taken in trying to contact families in the neighbouring villages, the second stage investigations were confined to the nuclear villages only. The second stage investigations consisted of three independent enquiries. One was an investigation into the institution of marriage covering such particulars as manner in which marriages were arranged, expenses incurred on marriages and attitudes governing the age at marriage. This investigation was confined to marriages reported to have taken place during the previous three years. We have obtained such details regarding a total of 459 marriages. The second investigation concerned the attitudes towards

family limitation and planning. This was confined to married women of ages between 25 and 40 years who had experienced at least one pregnancy during the previous five years. This investigation was conducted in all but one of the selected centres. As earlier mentioned, the lady investigator at Mudalagi, in Belgaum district, had to go on medical leave and much of the investigation at that centre had to be curtailed on that account. In the remaining five centres, we have a total sample of 634 women canvassed by the family planning questionnaire. The third special investigation undertaken was a diet survey in a sample of 373 families. The questionnaires used for these three investigations are reproduced in the appendix to this chapter. More investigational particulars relating to these investigations are given in the relevant chapters.

The entire investigation at each centre took nearly a whole year. More than one visit was often necessary to the same household in order to minimise non-response or indifferent response. This was particularly true in respect of the questionnaire on attitudes towards family planning and also in relation to the diet survey. But on the whole, though it needed a certain amount of tact and persuasion, the response was fairly complete and genuine. This was apparent from the numerous notes which the investigators had appended to the questionnaire forms. They covered their experiences during the investigation, the nature of response met with and their own impressions on relevant points formed during the course of the interview. In a later chapter, we have abstracted some of these notes.

In subsequent chapters, we shall present the main findings of the investigation.

APPENDIX
GENERAL FAMILY SCHEDULE

Serial No.	Date
Village	Investigator
Name of head of family	Sex/Age
Religion	Caste
Principal Occupation	Subsidiary Occupation
Number of members in the family :	
Males of age 13 and above	Male children below 13
Females of age 13 and above	Female children below 13

FOR ALL MALE MEMBERS OF THE FAMILY

- | | |
|---------|-------------------------|
| 1. Name | 3. Relation to the head |
| 2. Age | |

Education and Earning Status :

- | | |
|-------------------------------------|--|
| 4. Can read or not | 5. Can write or not |
| 6. Educand or not | 7. If educand, standard in which reading |
| 8. If not in school, earning or not | 9. If not earning, why not |

Marital Status :

- | | |
|--|------------------------------------|
| 10. Married, unmarried or widowed | |
| 11. If married, order of the present marriage | |
| 12. Number of living wives | |
| 13. Age at first marriage | 14. Age at present marriage |
| 15. Name of present wife | 16. Age of present wife |
| 17. Relation between husband and wife, before marriage | |
| 18. Is wife at present staying in this household | |
| 19. If not, where does she stay | |
| 20. Reasons for her being away | 21. How long, has she been away |
| 22. If unmarried, whether intending to marry | |
| 23. If widowed, his age at death of wife | |
| 24. Age of wife at death | 25. Reasons for not marrying again |

Health :

- | | |
|--|--|
| 26. Any illness during previous year | 27. Time of the year, when ill |
| 28. Duration of illness | 29. Treatment |
| 30. If treated by a professional, from which place | 31. Expenditure incurred |
| 32. Any domestic remedies tried | 33. Any chronic illness such as asthma, T.B., etc. |
| 34. Any physical disability | 35. Any mental disability |
| 36. Is it congenital | 37. If not, cause and how old |
| 38. Treatment | 39. Expenditure incurred |

FOR ALL FEMALE MEMBERS OF THE FAMILY

1—9. As for the male members

Marital Status :

10. Married, unmarried or widowed
11. If not unmarried, whether intending to marry
12. Whether engaged
13. If engaged, whether with a relation
14. If not engaged, whether seeking
15. How long
16. If married, order of present marriage
17. Duration of widowhood, if second marriage was due to death of first husband
18. Duration of separation, if second marriage was due to separation from first husband
19. Cause of separation
20. Age at first marriage
21. Age at present marriage
22. Is she at present staying with the husband's family
23. If not, why
24. If, at present staying with father, when is she likely to return to the husband's family
25. Name of husband
26. Age of husband
27. Any relation between husband and wife, before marriage
28. Is the husband at present staying in this household
29. If not, where does he stay
30. Reasons for his being away
31. How long has he been away
32. For how many months of the year, does he stay in this household
33. If widowed, her age at death of husband
34. Age of husband at death
35. Reasons for not marrying again
36. Means of livelihood, since the death of husband

Health :

37. Age at puberty
38. Whether regular about menses
39. Duration of menstrual cycle
40. Any complaints regarding menses
41. Whether attained menarche
42. If so, when
- 43—55. Same as 26-39 for the male members.

FOR ALL FEMALE MEMBERS OF AGE 13 AND ABOVE

1. Name
2. Age
3. Relation to head

Fertility History : (Record of all children born of all marriages to be entered by order of marriages and by order of birth)

1. Order of marriage
2. Order of birth
3. Name of child
4. Sex
5. Whether living or dead
6. If living, present age
7. Marital status
8. Place of residence
9. If dead, age at death
10. Present age, if had not died
11. Remarks

INTRODUCTORY

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Fertility record of the preceding whole year :

- | | |
|------------------------------|---------------------------|
| 1. Name of child | 2. Sex |
| 3. Place of birth | 4. Date of birth |
| 5. Whether living or dead | 6. If living, present age |
| 7. If dead, age at death | 8. Place of death |
| 9. Cause of death | 10. Treatment |
| 11. Expenditure on treatment | 12. Remarks |

RECORD OF DEATHS IN THE FAMILY DURING THE PRECEDING WHOLE YEAR

- | | |
|---------------------|------------------------------|
| 1. Name of the dead | 2. Relation to the head |
| 3. Sex | 4. Age at death |
| 5. Place of death | 6. Date of death |
| 7. Cause of death | 8. Duration of last illness |
| 9. Treatment | 10. Expenditure on treatment |
| 11. Remarks. | |

QUESTIONNAIRE FOR ASSESSING ATTITUDES TOWARDS FAMILY PLANNING

(For all female members of age between 25 and 40 who experienced at least one pregnancy during the past five years)

Serial No.	Date
Name of head of family	Investigator
Village	Name of the woman interviewed

Last Child :

- | | |
|---|---|
| 1. Was a child born alive during last five years? | 2. If so, date of birth of the last child |
| 3. Whether alive or dead | 4. If living, present age |
| 5. If dead, age at death | 6. Cause of death |

Regarding pregnancy :

- | | |
|--|---|
| 7. Did you have any complaints during the pregnancy of this child? | 8. If so, their nature |
| 9. Did you take any special care of diet and nutrition during the pregnancy? | 10. If so, its particulars |
| 11. Were you breast-feeding any child during this pregnancy? | 12. If so, upto which month of the pregnancy? |

Regarding delivery :

- | | |
|---|--|
| 13. Was the delivery of the above child done in this village? | 14. If not, why not and where was it done? |
| 15. Particulars of antiseptics used in the post-natal period | 16. Particulars of any special treatment, diet, etc., in the post-natal period |
| 17. Particulars of expenses on
(i) services of midwife
(ii) medicines | (iii) special food
(iv) other items |

18. Was any adult woman present in the household during the first ten days of the delivery? If not, who looked after the household?
20. Did you have any trouble during or after the delivery? If so, its nature
22. What do you think, was the real cause of this trouble?
- | | |
|---|---|
| (i) Chronic illness | (ii) Temporarily bad health |
| (iii) Exertion | (iv) Malnutrition |
| (v) Too many deliveries | (vi) Too short spacing between deliveries |
| (vii) Any specific complaint during pregnancy | (viii) Any other cause—give details |
23. How long was the baby completely breast-fed? When did you wean it completely?
25. When did you have the first menses after the above-mentioned delivery? 26. Were you every pregnant after the abovementioned delivery?
27. If so, give particulars of how it ended. 28. When did you have the menses again after the above-mentioned circumstances?
29. Are you at present pregnant? 30. If so, the month of pregnancy.
31. If not, do you at present get menses regularly? 32. If so, when did you have the menses last?
33. When do you expect them next?
34. If you are unable to say when, why?
- | | |
|---------------------------|-----------------------|
| (i) Ignorance | (ii) Irregular menses |
| (iii) Suspected pregnancy | |
35. If you ever miss menses, do you know of any methods of getting them back? 36. Particulars
37. Do you know the connection between menses and pregnancy? 38. Do you know that conception can take place only during certain period of the menstrual cycle?
39. Do you know that if you want a child, you should have sexual relations with your husband, during a certain period of the menstrual cycle? 40. Do you know that if you do not want a child, you could escape conception by avoiding having relations with your husband during a certain period of the menstrual cycle?
42. If not, how far can you avoid having relations with your husband for a short period of each menstrual cycle? 43. May I discuss this matter with your husband either alone or along with yourself?

QUESTIONNAIRE ON MARRIAGES

(For all females married during the past three years)

Serial No.

Date

Village

Investigator

Name of head of family

Name of the married woman

- Name of the informant Relation of the married woman to the informant
- Date/month/year of marriage under report
1. Present age of the married woman
 2. Her age at marriage
 3. Present age of husband
 4. His age at marriage
 5. Home village of the woman
 6. Distance between her home village and that of her husband
 7. Who made the marriage proposal?
 8. Through whose good offices, was it arranged?
 9. Were there any other proposals?
 10. If so, particulars regarding the proposed bride-grooms
 - (i) education,
 - (ii) occupation,
 - (iii) income,
 - (iv) place of residence and
 - (v) reasons for rejection
 11. Strong points of the particular choice made :
 - (i) education,
 - (ii) occupation,
 - (iii) landed property,
 - (iv) good financial position,
 - (vi) independent earner,
 - (v) good family,
 - (vii) amount paid for bride,
 - (viii) other points.
 12. Date of engagement
 13. Period between engagement and marriage
 14. Reasons for the delay
 15. Was it due to financial difficulties on the bride's/bride-groom's side
 16. Expenditure incurred on marriage:
 - (i) Clothing,
 - (ii) Ornaments,
 - (iii) Feasting,
 - (iv) Dowry,
 - (v) Other items.
 17. Was any debt incurred to meet the expenditure
 18. If so, its amount
 19. Was any property mortgaged for the purpose
 20. If so, particulars
 21. Do you think that the girl married:
 - (i) Too early,
 - (ii) At an appropriate age,
 - (iii) Too late?
 22. If she married too early, reasons :
 - (i) The proposal was particularly good,
 - (ii) earned good bride-money,
 - (iii) her parents could not feed her any longer,
 - (iv) her in-laws wanted her to work in their household,
 - (v) other.
 23. If she married too late, reasons :
 - (i) No good proposal was forthcoming,
 - (ii) her parents could not afford the marriage expenses,
 - (iii) the parents needed her to work at home,
 - (iv) physical disabilities,
 - (v) other.
 24. If you think she married at an appropriate age : state difficulties or disadvantages of marrying late.

QUESTIONNAIRE FOR DIET SURVEY

Serial No. _____ Date _____
 Village _____ Investigator _____
 Name of Head of Family _____ Family vegetarian or non-vegetarian _____
 Number of persons : Vegetarians _____
 Non-Vegetarians _____

Reasons of vegetarians for not taking non-vegetarian food _____

Is non-vegetarian food forbidden any specific time of the week/month/year? _____

Food item	If it is consumed daily, daily consumption		consumption last week		consumption last month		If never consumed during last month have you ever consumed it during last year? When?
	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Milk							
Butter, ghee							
Vegetable							
Oil							
Sugar							
Raw sugar							
or Gur							
Fruits							
Vegetables							
Eggs							
Mutton							
Dry fish							
Chicken							
Fish							

Quantity of milk consumed daily

Notes regarding seasonal changes in the kind of food _____

Cost of milk _____

Quantity of milk consumed in :

(a) drinking plain (b) in tea (c) others _____

Names and ages of those who take milk and the quantity consumed _____

Date	Day-Tithi	Number of Consumption Units		Remarks
		Quantities consumed		
		Bajri		
		Jowar		
		Nachani		
		Wheat		
		Rice		
		Pulses		
		Vegetables		
		Mutton		
		Others		
Date of information	Menu for the day-meal	Menu for the evening meal	Remarks	
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Notes :				

CHAPTER II

NOTES ON SELECTED VILLAGES

In the following, we give brief descriptive notes on the centres selected for investigation.

The centre chosen from Ahmednagar district consisted of the nuclear village of Mirajgaon and the neighbouring villages Gondardi, Diksal and Guravpimpri. Mirajgaon is situated on the Ahmednagar-Karmala road 32 miles from the district town of Ahmednagar. It is 10 miles from Karjat which is the taluka town. The three neighbouring villages are within four miles from Mirajgaon. In Table No. 2.1, we give the populations of these villages at the censuses of 1941, 1951 and at the time of our survey in 1955 together with the number of households in 1951 and in 1955.

TABLE No. 2.1.

Particulars of villages comprising the centre in Ahmednagar district.

Name of the village	Population at 1941 census	Population at 1951 census	Surveyed population in 1955	No. of households in 1951	No. of households in 1955
Mirajgaon	3415	4346	4467	703	806
Gondardi	92	120	128	20	23
Diksal	476	512	543	83	86
Guravpimpri	1090	1263	1555	217	297
Total	5073	6241	6693	1023	1212

The centre is situated in the famine and drought-labile tract of the Bombay Deccan. Besides agriculture, sheep rearing is an important industry in the locality. In Mirajgaon proper, there is also a large concentration of Dhors who are tanners. They have formed into a co-operative society and do considerable business. At the time of our survey, a minor irrigation tank was under construction at Guravpimpri. A large number of persons from the selected villages and the neighbouring area were employed on this work.

The villages suffered from inadequate supplies of drinking water. Sanitation, particularly in Mirajgaon, was unsatisfactory even by normal rural standards. A village of its size needs proper arrangements for the disposal of human waste. As it was, the streets and the ruins of deserted houses were being used for the purpose. It was reported that malaria was common but this was not borne out by the findings of our investiga-

tion. There was a considerable concentration of lepers in Mirajgaon and in fact Mirajgaon is often locally referred to as 'Maharogyache (lepers') Mirajgaon'. A reference to this appears even in the District Gazetteer of 1884. About 15 years ago, a social medical worker opened a leper clinic in this village but found that the lepers were unwilling to visit the clinic for fear of being exposed. During our investigation, we arranged for a medical examination of the residents of Mirajgaon with a view to assessing the incidence of leprosy. We received full co-operation from the villagers. After a preliminary examination of all the residents, the suspects were subjected to a more thorough examination. This was done by qualified medical specialists in the field. As a result, we found that there were 37 leper cases in a population of 4346. This meant an incidence of 9 per thousand. It seemed that the villagers had suspected a higher incidence and were relieved to know that after all the village was not as infested with lepers as it was commonly believed. The District Local Board ran a free dispensary and a hospital in Mirajgaon. In the hospital, there was a separate room for lepers. There were two private medical practitioners in Mirajgaon but only one of them practised medicine proper while the other practised treatment by appeasement of deities and so forth. There was no trained midwife in the village. In cases of emergency the villagers had to go to Ahmednagar, which is 32 miles away. Our investigator, during her stay, conducted 8 deliveries in the village for which the villagers felt obliged. Three women not having a child desired treatment for sterility and the investigator put them in touch with qualified medical men.

Mirajgaon is an important marketing centre with a number of traders in agricultural commodities. There are three co-operative credit societies in Mirajgaon and one in Guravpimpri. There is also a Gram-Panchayat both in Mirajgaon and Guravpimpri. The Panchayat in Mirajgaon conducted a free library and a reading room. It also ran a recreation centre with a radio and a few musical instruments. The schooling facilities at the centre were good. There were five primary schools at Mirajgaon, two in Guravpimpri and one at Diksal. Besides, there was a high school at Mirajgaon with hostel accommodation for 50 students. The students in the neighbouring villages could thus take advantage of the high-school. Mirajgaon had a post office and was served by a regular bus service.

The centre in West Khandesh consisted of the nuclear village of Dhanore and 7 smaller neighbouring villages. Dhanore is on the Nandurbar-Raigad Road, 14 miles from Nandurbar which is the taluka town and a railway station. The village Dhanore itself consists of the main village site and seven hamlets within a distance of 2 miles from the main village site. The smaller selected villages are within 4 miles from Dhanore. In Table No. 2.2 are presented the populations at the censuses in 1941

and 1951 and in 1955 and the households in 1951 and 1955 in the villages comprising this centre.

TABLE No. 2.2.

Particulars of villages comprising the centre in West Khandesh district.

Name of the village	Census population in 1941	Census population in 1951	Surveyed population in 1955	No. of households in 1951	No. of households in 1955
Dhanore	3185	3934	3963	1102	690
Mangrul	177	262	281	43	50
Karanjee	277	301	247	38	44
Lakhamikhede	460	631	644	105	111
Khadade	990	936	779	120	133
Arditara	412	467	471	76	86
Borade	551	560	592	94	106
Adade	463	519	542	75	97
Total	6515	7610	7519	1653	1317

At the time of our survey, there were found 1317 households comprising a population of 7519 at this centre. The figures for population and the number of households reported in our survey do not, however, compare well with those reported in the 1951 Census. Thus, in the case of Dhanore, though the two population figures agree well, the number of households reported in the survey are only about 60 per cent of those reported in the 1951 Census. There are similar discrepancies in respect of the other villages and they cannot be explained satisfactorily.

Bhils constituted the majority community at this centre. They are a tribal people though at this centre they were all settled agriculturists. Nevertheless, in their social organization and customs, they retain certain distinctive features. In particular, as we shall later see, their marriage pattern is different and, compared with the agricultural communities, their women enjoy a greater degree of freedom.

A tributary of the river Tapi provides the supply of drinking water for Dhanore. In the surrounding villages, there are wells used for the purpose. In general, the supply of drinking water at this centre was reported to be satisfactory. General sanitary conditions were also satisfactory and the village settlements were found to be much cleaner as compared with those at the other centres. In the neighbourhood, there is a large forest area and, until recently, the entire neighbourhood was affected by malaria. The anti-malaria measures such as DDT spraying undertaken by the Public Health Department of the State Government has now brought the malaria effectively under control. At the time of our survey, a cer-

tain incidence of scabies was found among children and diarrhoea became common in certain seasons of the year. Nevertheless, the general standard of health of the population appeared distinctly good.

There was no medical practitioner at this centre. However, there was a dispensary run by the Swedish Mission. The Mission used to run a hospital at Dhanore but now it has been closed, reportedly because the people did not make much use of it. At present, the nearest hospital is that at Nandurbar, which is 14 miles away.

Dhanore is an important marketing centre. It has a branch post-office, a Gram-Panchayat and two credit co-operative societies. There were also credit societies in two other villages covered by the centre. All, except one, of the villages comprising the centre had primary schools but the attendance at schools was unsatisfactory and irregular. Drinking habit was common among men and often caused annoyance to our investigator.

The centre in Ratnagiri district consisted of the single village of Mithbaon which is situated on the coast about 20 miles off Deogad which is the taluka town. At the time of our survey, there were 1130 households comprising a population of 5140. According to the 1951 Census, there were 1155 households with a population of 5440. In view of the great dependence of this village on the city of Bombay, to which we shall later make a reference, and the consequent out-migration to which it seems subject, the reported decline in the population during the four years from the 1951 Census to our survey, is likely to be real.

As mentioned above, the village depends very greatly on the city of Bombay for its living. This is a feature common to the entire Ratnagiri district. A large number of men from this district find employment in the city of Bombay either seasonally or more or less permanently and their families left behind in the villages receive regular remittances from them. Agriculture in the district is confined mostly to a single rice crop. Mithbaon being a coastal village, agriculture is even less important here. Only about 40 per cent of the families in the village were reported to depend on agriculture. On the other hand, fishing is an important industry and nearly 20 per cent of the families depended on it. Fish also formed an important element of the diet of the population.

A marked feature of this village was its high degree of literacy for which its contact with the city of Bombay was partly responsible. According to the survey results, 61 per cent of the males and 27 per cent of the females were found to be literate. There were five primary schools, a high school, a fishery school and a teachers' training school in the village. These schools had fairly good libraries and their reading rooms received magazines and newspapers. Reading habit was found quite common and in this respect, the centre was distinctly different from the other centres.

The village was served by a regular post office, had a Gram-Panchayat and also a co-operative credit society. There were two medical practitioners in the village. For major cases, the people went to Deogad which is 20 miles away.

The centre in Parbhani district consists of the nuclear village of Bori and 8 neighbouring villages. Bori is situated 18 miles from Parbhani, the district town, on the bus road connecting Parbhani to Jintur, which is the taluka town. In Table No. 2.3, are given for all the villages comprising the centre, their populations at the censuses in 1941, 1951 and at the time of our survey in 1955. It also shows the number of households reported at the 1951 Census and in our survey. It will be seen that the increase in population recorded during the period is rather small.

TABLE No. 2.3.

Particulars of villages comprising the centre in Parbhani District.

Name of the village	Census population in 1941	Census population in 1951	Surveyed population in 1955	No. of households in 1951	No. of households in 1955
Bori	3234	3246	3397	590	710
Dhanore	408	382	383	70	91
Nagapur	106	112	106	30	27
Deogaon	280	292	294	157	70
Mudha	326	276	309	58	67
Nagthana	173	135	124	26	21
Ganpur	144	200	150	34	34
Dohora	523	548	563	107	114
Chanaaj	725	734	746	143	151
Total	5919	5925	6072	1215	1285

There are a large number of wells at Bori used for drinking water. The river Karpara flows through the remaining villages of the centre and supplies drinking water for part of the year. For the rest, each village has an adequate number of wells supplying drinking water. The drinking water well of only one of the villages was reported to be infested with guinea worms. On the whole, the supply of drinking water appeared adequate and satisfactory. The general sanitary conditions in the villages were however very unsatisfactory for which the ignorance and illiteracy of the people was alone responsible.

There was no qualified medical practitioner either at Bori or in any other village comprising the centre. The Gram-Panchayat at Bori had arranged to maintain a small store of common drugs like quinine,

iodine and a few anti-biotics. But for want of advice, it could not be made much use of. For normal medical assistance, the people went to Jintur which is 6 miles away or to Parbhani which is 18 miles away.

Bori is an important marketing centre and is well served by the bus road. It has also a post office. There is a Gram-Panchayat, a co-operative credit society and a grain bank. However, the people on the whole were quite illiterate. At Bori, there was a primary school and also a separate primary school for girls. Two other villages comprising the centre had also primary schools. The attendance at schools was however very unsatisfactory and the people looked indifferent. Of the six centres covered by this study, the one at Bori was marked for its lowest level of literacy.

Mudalgi from Belgaum district is one of the two Kannada speaking centres covered by this study. It is situated at a distance of 15 miles from Gokak which is the taluka town. At the time of our survey, there were 840 households with population of 4530. On the other hand, there were 872 households with a population of 4691 recorded at the 1951 Census. The decline may not be real because we are not quite certain of the completeness of our enumeration at this centre. As previously mentioned, the investigation here had to be abruptly discontinued towards the end on account of a sudden illness of our investigator.

Two wells were in use for purposes of drinking water and their supply was usually adequate except in summer. The village appeared particularly conscious of sanitation and public hygiene. A separate area was marked out for use in the morning and was cleaned daily by a scavenger employed by the Gram-Panchayat for the purpose. The Gram-Panchayat also took active interest in vaccination, and also in measures undertaken by the District public health authorities to control malaria and also the menace of rats and dogs. No specific diseases appeared common in the village though our investigator suspected a certain incidence of T.B. Medical facilities at this centre were also much better than at most of the other centres covered by our study. There was one qualified medical practitioner appointed by the District Local Board and the treatment was free. Besides, there was a qualified medical practitioner, a health visitor and a midwife appointed by the Community Project Administration and they visited the village frequently. For more serious cases, the villagers could go to the general hospital at Gokak, 15 miles away.

Mudalgi is an important marketing centre. It is served by a post office. The railway station of Chikodi Road is only 18 miles away and in general the village has good communications. There is a Gram-Panchayat and, as mentioned above, it appeared to be a particularly active and enlightened body. Most of its members were well educated. There is a small weaving community in the village and they have their own co-operative society.

The centre in Gulbarga district consists of the nuclear village of Nalwar and two neighbouring villages. This is the second Kannada speaking centre covered by this study. Nalwar is a railway station on the Central Railways, 9 miles from Wadi which is an important railway junction. The residential site of Nalwar is 2 miles from the railway station. It is almost a small town with a population of over 5000. In Table No. 2.4, we give the population and the number of households for the villages comprising this centre at the time of the 1951 Census and at the time of our survey.

TABLE No. 2.4.

Particulars of villages comprising the centre in Gulbarga District.

Name of the village	Census population in 1951	Surveyed population in 1955	No. of households in 1951	No. of households in 1955
Nalwar	5789	6363	1088	1321
Sooguru	1063	1096	209	249
Kalkanda	580	522	102	109
Total	6575	7981	1406	1679

Nalwar in spite of its being a small town presents a picture of an unenlightened area with its peculiar caste-composition, low standards of literacy and education, and unsatisfactory sanitary and hygienic conditions. Scheduled castes and backward castes constituted a large percentage of the population. About 25 per cent of the population belonged to the Lamans, who are a tribal people. They were divided into 9 groups each group being headed by a leader. There were also a large number of Muslims constituting about 20 per cent of the total population.

Besides agriculture, an important means of livelihood at this centre was employment in the nearby stone-quarries and in the cement factories at Shahabad which is 6 miles away. There was also a weaving community engaged in handloom weaving.

For a town of its size, the supply of drinking water was inadequate and the sanitary conditions were unsatisfactory. There were two medical practitioners but people more often relied on their own ignorant treatment of diseases. People were mostly illiterate. There were only two primary schools, one for the boys and the other for the girls and even there the attendance was unsatisfactory. Drink habit was common and prostitution was considerable.

CHAPTER III

POPULATION

In this chapter, we shall describe the composition of the population by age and economic status. In Table No. 3.1 is given the single year age distribution of the male and female population covered by our investigation at the six centres. It will be seen that the distribution is affected by the usual inaccuracies in age reporting. There is a pronounced preference for ages ending in 0 and 5. This becomes apparent at age 20 and becomes more pronounced at later ages thus indicating a decreasing accuracy of reporting at later ages. A close scrutiny of the reported ages at later years such as after 60, shows that the reported age is merely a notional or a conventional figure. The person concerned himself usually confesses to have only a hazy notion of his age and if the members of his family are consulted, different members are seen to give very widely different ages. After a great deal of effort to reconstruct these ages from the reported figures and other cognate evidence, we gave up the attempt as hopeless. Therefore in the Table under discussion we have lumped together all reported ages above 57.

In addition to the primary preference for ages ending in 0 and 5, there is evident a secondary preference for the ages ending in even digits to those ending in odd digits. The preference for even digit-endings is evidently stronger in the case of 2 and 8 than in the case of 4 and 6 presumably because the digits 4 and 6 suffer from the proximity of the digit 5 for which there is a primary preference. For the same reason, the odd digits 1 and 9, because of their proximity to the digit 0, seem to suffer worse than the odd digits 3 and 7.

The extent to which such preferences for certain digits affect the reporting of age, may be judged from Table No. 3.2. In this Table, we have summarised the single year age distribution of Table No. 3.1, into one with quinquennial age groups centred at ages ending in 0 and 5, namely, 5, 10, 15, etc. The numbers reported in each quinquennial age group are then classified into three groups, namely, the number reported at (i) ages ending in 0 and 5; (ii) ages ending in the even digits 2, 4, 6, 8 and (iii) ages ending in the odd digits 1, 3, 7, 9. With reasonably accurate age reporting, we should expect that in each quinquennial age group, approximately 20 per cent should appear against ages ending in 0 or 5; about 40 per cent against ages ending in 2 and 8 or 4 and 6; and about 40 per cent against ages ending in 1 and 9 or 3 and 7. This is nearly so in the first two age groups of 3-7 and 8-12. But after that the proportion

TABLE No. 3.1.

Single year age distribution of male and female population covered by the investigation.

Age in completed years	No. of males	No. of females	Age in completed years	No. of males	No. of females
Below 1	616	651	31	52	98
1	456	481	32	228	271
2	547	615	33	98	119
3	620	608	34	83	137
4	594	589	35	718	474
5	659	565	36	106	171
6	655	562	37	52	118
7	525	580	38	159	229
8	527	583	39	37	90
9	495	573	40	695	491
10	498	575	41	21	58
11	443	494	42	129	170
12	447	496	43	41	106
13	217	295	44	33	78
14	404	385	45	587	433
15	341	368	46	22	127
16	386	393	47	33	91
17	174	315	48	89	159
18	461	432	49	19	59
19	155	208	50	520	460
20	550	578	51	15	53
21	117	195	52	84	133
22	363	428	53	26	58
23	167	214	54	26	65
24	168	270	55	328	251
25	708	589	56	87	74
26	195	244	57	23	54
27	137	207	above 57	954	1151
28	281	349			
29	45	99			
30	782	625			
			Total	17948	19344

reported at the ages ending in 0 or 5 increases and becomes larger and larger in subsequent age groups. For instance, in the age group 23-27, more than half of the males reported their age as 25 and in the age group 53-57, nearly three-fourths reported their age as 50. The concentration at the ages ending in 0 and 5 occurs at the expense of the ages ending in all other digits but among them relatively the ages ending in the odd digits are seen to suffer to a greater extent than the ages ending in the even digits. Thus in practically all the age groups, the reporting at ages

ending in 2 and 8 or 4 and 6 is heavier than at ages ending in 1 and 9 or 3 and 7. Among the odd digits, the digits 1 and 9 seem to suffer more because of their proximity to the digit 0 and among the even digits, the digits 2 and 4 seem to suffer more because of their proximity to the digit 5.

Compared with the age distribution of the males, that of the females shows a smaller concentration at the ages ending in 0 or 5. Therefore, it may seem that the reported ages of the female population are somewhat more accurate than those of the males. This may be true but it is not because the original reporting of the ages of the females was any better than that of the males. If anything the reporting of the ages of the females was more unsatisfactory. However, wherever possible we tried to adjust and correct the reported ages by circumstantial evidence like the reported ages at marriage, the reported differences between the ages of husband and wife, the reported ages at the first child and the reported ages of the children themselves. We have done this both for the ages of the males and females but obviously such circumstantial evidence affords a better check and correction of the ages of the females than of the males. Therefore it is possible that the ages of the females as finally appearing in our analysis are somewhat more accurate than are the ages of the males.

We may now briefly compare the sex and age-distribution of the population at different centres. In Table No. 3.3 are given the age distributions of the male and female populations at different centres. From the bottom line of this Table, showing the total number of males and females at each centre, it will be apparent that the six centres divide themselves into two groups, one with more or less even sex ratio and the other with a relatively larger female population. At Bori, Dhanore and Mirajgaon, the sex ratio is more or less even. As will appear from the notes given in the previous chapter, these three centres are relatively unaffected by migration influences leading either to outmigration or immigration. On the other hand, the other three centres, namely, at Mithbaon, Mudalgi and Nalwar are affected by substantial outmigration. As we have earlier noted, Mithbaon is strongly affected by the influence of the city of Bombay. Nalwar is affected by the stone quarries in the surrounding area and by the cement factories at Shahabad only 6 miles away. The centre at Mudalgi was affected by the work on the Ghataprabha canals which was then in progress. It is possible that the outmigration from this centre was only temporary. At all the three centres, as the outmigrating population is predominantly male, there appear more females than males in the resident population. The sex-ratio, namely, the ratio of females to males is the highest at Mithbaon. It is also considerable at Nalwar. The sex-ratios at these centres provide a good indicator of the extent of outmigration to which these centres are subject.

TABLE No. 3.2.

Distribution of the male and female population in quinquennial age groups showing preferences for specific digit-endings in reported ages.

Age Group years	MALES			Total number	FEMALES			Total number
	Per cent with reported ages ending in digits 0, 5	2, 4, 6, 8	1, 3, 7, 9		Per cent with reported ages ending in digits 0, 5	2, 4, 6, 8	1, 3, 7, 9	
3—7	21.59	40.91	37.50	3053	19.45	39.64	40.91	2904
8—12	20.66	40.42	38.92	2410	21.13	39.66	39.21	2721
13—17	22.40	51.91	25.69	1522	20.96	44.30	34.74	1756
18—22	33.41	50.07	16.52	1646	31.40	46.71	21.89	1841
23—27	51.49	26.40	22.11	1375	38.65	33.73	27.62	1524
28—32	56.34	36.67	6.99	1388	43.34	43.00	13.66	1442
33—37	67.93	17.88	14.19	1057	46.51	30.23	23.26	1019
38—42	66.76	27.67	5.57	1041	47.30	38.44	14.26	1038
43—47	81.98	7.68	10.34	716	51.86	24.55	23.59	835
48—52	71.52	23.80	4.68	727	53.24	33.80	12.96	864
53—57	74.54	14.32	11.14	440	50.00	27.69	22.31	502

TABLE No. 3.3.

Distributions by age of the male and female populations at the surveyed centres.

Age in completed years	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		ALL CENTRES	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Below 7	18.3	20.3	27.3	23.5	21.6	22.3	22.5	16.1	23.0	21.5	24.6	21.7	23.1	21.0
7—12	18.7	17.3	17.8	18.2	20.4	20.1	22.9	16.3	12.0	16.6	7.2	14.1	16.3	17.1
13—17	6.1	5.8	8.7	10.3	7.6	8.6	13.2	9.8	7.7	8.4	8.6	10.6	8.5	9.1
18—22	8.4	10.4	8.8	9.3	9.3	9.9	8.2	7.4	10.8	9.7	9.8	10.2	9.2	9.5
23—27	7.2	6.7	8.1	9.2	8.1	7.4	4.0	7.3	7.1	7.8	9.9	8.3	7.7	7.9
28—32	9.2	9.3	7.2	6.7	7.1	7.2	3.8	6.3	8.9	8.8	9.4	7.1	7.6	7.4
33—37	6.7	5.4	5.3	4.3	5.7	5.4	3.8	5.5	5.9	5.4	7.4	5.7	5.9	5.3
38—42	8.1	5.8	4.6	4.8	5.2	4.6	3.7	5.2	7.4	5.1	6.1	6.5	5.8	5.4
43—47	5.1	3.8	3.2	4.3	3.4	5.1	2.5	4.9	4.8	4.1	4.8	3.7	4.0	4.3
48—52	4.8	5.3	3.3	3.6	3.9	3.1	3.3	6.5	4.5	3.9	4.7	4.7	4.1	4.5
53—57	2.4	2.0	1.6	1.9	2.3	1.9	3.7	4.2	3.1	2.6	2.4	3.1	2.5	2.6
58 and over	5.0	7.9	4.1	3.9	5.4	4.4	3.4	10.5	4.8	6.1	5.1	4.3	5.3	5.9
Total	3056	3010	3731	3764	3355	3326	2237	2891	2084	2274	3485	4078	17948	19348

M = Male.

F = Female

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There are important differences in the age composition of the populations at different centres and not all of them are readily explicable. At Mithbaon, the population at the younger ages such as those upto 17 years constitutes a large proportion in the male population. The population at the older ages such as those above 52 is also large. At this centre, the population at the younger and the older ages namely those upto 17 and above 52 constitutes more than 70 per cent of the male population. This is very much larger than at the other centres and is in accordance with the large outmigration of the male population to which this centre is subject. But at Nalwar and Mudalgi, the two other centres which seemed affected by outmigration, the male population at the younger and the older ages is quite small. In fact, the population at the younger ages at these centres is smaller than at all the other centres.

At Dhanore, the population in younger age groups is quite large but otherwise the age composition of the population at this centre is quite different from that of the population at Mithbaon. As we have earlier seen, Dhanore is characterised by an even sex-ratio and there is no evidence of it being subject to any migration influences. The large population at younger age groups at this centre is therefore not a consequence of any outmigration as it is at Mithbaon. This is also evident from other features of the age composition at Dhanore in which it differs from the age composition at Mithbaon. At Dhanore, unlike at Mithbaon, the population at younger ages is also large among females. Also, as compared with that at Mithbaon, at Dhanore, the population at higher ages is very much smaller. In fact, it is the smallest among all the centres. It seems therefore that at Dhanore, the very large proportion of the population at the younger ages and the very small proportion at the higher ages is a consequence of the fertility and mortality rates to which its population is subject. However, the populations at the two other centres, namely Bori and Mirajgaon, which also do not seem subject to any migration influences have age compositions substantially different from that of the population at Dhanore. In particular, the population at Bori shows one of the smallest proportion at younger ages. It is not clear that the differences in the age structures of the populations at Dhanore and Bori can all be explained as due to differences in the fertility and mortality rates to which the two populations might be subject.

We may next examine the working status of the population. We shall first concentrate attention on the younger age groups. In Table No. 3.4 is given for all the centres together, the distribution of the male and female population between the ages 5 and 17 according to the working status. Three categories are distinguished namely, Idle, In-school and Working. It will be seen that among the boys the maximum proportion in school is attained between ages 7 and 10 when a little over 55 per cent

of the boys are found in school. Thereafter the proportion declines. Nevertheless, even at ages 11 and 12, over half the boys are in school. In the age group 13-17, only about one-third of the boys are in school while two-thirds are already working. Among the girls also the proportion in school attains its maximum between ages 7 and 10 but here it is only a little more than 25 per cent. The proportion of the working population among the girls also rises much more slowly than among the boys so that even at ages 11-12, over 55 per cent of the girls are idle. But in the next age group, 13-17, a sudden change takes place and over 70 per cent of the girls are found working. Very few of them at these ages are in school. If they are not working, they stay at home, many of them already married, helping in the household work.

TABLE No. 3.4.

Distribution by working status of the male and female population between ages 5 and 17 (all centres).

Age	Idle per cent	In school per cent	Working per cent	Total number
MALE				
5-6	82.7	15.5	1.8	1314
7-8	30.3	55.9	13.8	1212
9-10	13.8	56.9	29.3	1216
11-12	7.2	51.9	40.9	1074
13-17	3.7	31.6	64.7	1520
All	30.7	41.2	31.1	6336
FEMALE				
5-6	91.0	8.4	0.6	1121
7-8	65.7	27.7	6.6	1152
9-10	57.5	26.0	16.5	1139
11-12	55.4	17.1	27.5	984
13-17	26.2	3.5	70.3	1734
All	56.0	15.3	28.7	6130

The distributions by working status of the young male and female population at different centres are given in Table Nos. 3.5 and 3.6 respectively. It will be seen that in the matter of schooling, Mithbaon stands out from all the other centres. Here nearly 80 per cent of the boys of ages 7-8 and nearly 95 per cent of the boys of ages 9-10 were in school. These are the proportions probably not attained even in many large cities. At later ages the proportion in school declines but only slowly. At ages 11-12, the proportion in school is still above 90 per cent and even in the age group 13-17, the proportion in school is nearly 75 per cent. This large incidence of schooling is of course partly due to the influence of the city

TABLE No. 3.5.

Distribution of the non-adult male population according to working Status.

Age years	Idle per cent	In-School per cent	Working per cent	Total number	Idle per cent	In-School per cent	Working per cent	Total number	Idle per cent	In-School per cent	Working per cent	Total number
	BORI				DHANORE				MIRAJGAON			
5—6	87.7	11.7	0.6	171	85.3	13.1	1.6	312	79.4	17.0	3.6	223
7—8	57.6	39.0	3.4	177	15.0	70.8	14.2	260	16.3	60.3	23.4	214
9—10	30.3	49.2	20.4	201	6.8	55.9	37.3	220	7.8	60.2	32.0	231
11—12	14.1	44.8	41.1	192	4.3	43.5	52.2	184	3.9	48.9	47.2	233
13—17	4.3	12.0	83.7	184	—	18.6	81.4	322	0.4	30.5	69.1	256
Total	37.5	32.1	30.4	925	25.3	37.6	37.1	1298	20.7	43.0	36.2	1157
	MITHBAON				MUDALGI				NALWAR			
5—6	87.9	12.1	—	173	78.8	19.2	2.0	146	78.9	18.7	2.4	289
7—8	20.3	79.7	—	172	34.0	44.2	21.8	156	44.2	38.6	17.2	233
9—10	5.0	94.4	0.6	180	8.5	55.0	36.4	129	21.2	35.3	43.5	255
11—12	7.7	92.3	—	156	6.0	54.9	39.1	133	7.4	34.7	57.9	176
13—17	11.8	73.0	15.2	296	—	26.7	73.3	161	4.0	20.3	75.7	301
Total	24.9	70.4	4.7	977	25.8	39.2	35.0	725	32.7	28.4	38.9	1254

TABLE No. 3.6.

Distribution of the non-adult female population according to working status.

Age years	Idle per cent	In-School per cent	Working per cent	Total number	Idle per cent	In-School per cent	Working per cent	Total number	Idle per cent	In-School per cent	Working per cent	Total number
	BORI				DHANORE				MIRAJGAON			
5—6	89.7	10.3	—	146	96.4	3.2	0.4	253	92.1	7.4	0.5	202
7—8	82.2	15.9	1.8	163	77.8	20.2	2.0	248	64.2	32.5	3.3	212
9—10	83.0	10.7	6.3	159	68.5	16.8	14.7	232	63.2	26.7	10.1	258
11—12	81.1	5.1	13.8	196	46.6	5.7	47.7	193	63.0	16.7	20.3	192
13—17	47.1	—	52.9	174	7.5	1.3	91.1	373	30.2	1.1	68.7	281
Total	76.1	8.1	15.7	838	55.0	8.7	36.3	1299	60.4	16.4	23.2	1145
	MITHBAON				MUDALGI				NALWAR			
5—6	84.6	15.4	—	136	92.9	4.7	2.4	127	87.9	11.3	0.8	257
7—8	81.5	68.5	—	162	54.8	22.2	23.0	135	72.8	14.2	12.9	232
9—10	15.2	84.1	0.7	145	38.2	17.1	44.7	123	59.5	12.6	27.9	222
11—12	89.1	56.6	4.3	161	31.1	9.2	59.7	119	61.0	10.6	28.4	123
13—17	87.4	18.4	44.2	283	20.0	—	80.0	190	26.8	—	73.2	433
Total	40.2	44.8	15.0	887	45.2	9.8	45.0	694	56.7	8.1	35.2	1267

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of Bombay with which this village is in continuous contact. The village also has the advantage of good educational facilities. Nevertheless, there also appears to be another circumstance which might also be partly responsible for the better schooling among the children. There is apparent in Mithbaon, as compared with other centres, a lack of employment opportunities for the children. Thus at Mithbaon, there was no working population even at ages 11-12 though 7.7 per cent of the boys at these ages were reported idle. At all the other centres, there was considerable working population even at younger ages and at ages 11-12, between 40 and 60 per cent of the boys at these centres were reported working. Moreover, at most of the other centres, the idle population at ages 11-12 was smaller than at Mithbaon. The same is true of the population in the next age group, namely, 13-17. In this age group, the working population at Mithbaon was quite small compared with that at the other centres while the idle population was considerably larger. Thus, it is obvious that Mithbaon suffered from lack of opportunities of employment for the young population. It seems possible that the same circumstance, though otherwise unfortunate, proved more conducive to the schooling of the children.

At the other extreme, in the matter of schooling of the boys, appears the centre at Nalwar where only about 35 per cent of the boys of ages 9-12 were reported to be in school. At the other four centres, this proportion is around 50 per cent. At all these centres, including that at Nalwar, between 70 and 80 per cent of the male population of ages 13-17 was reported working while the proportion reported idle at these ages was comparatively small.

Mithbaon distinguishes all the more in the matter of schooling of the girls. Here 84.1 per cent of the girls of ages 9-10 and 56.6 per cent at ages 11-12 were reported to be in school. At all the other centres, the proportion of the girls in school at ages 11-12 was less than 20 per cent. As in the case of boys, the working population among girls was much smaller at Mithbaon when compared with most of the other centres.

Particulars of the employment status of the adult population is given in Table No. 3.7. In this Table, the male and female adult population is divided into four age groups and in each group, the working population is shown as proportion of the total population. Here the term working population is used in the same sense as the gainfully occupied population. It will be seen that considering all centres together 92.6 per cent of the adult male population and 73.2 per cent of the adult female population was working. In the age group 18-47, these proportions are 96.0 and 78.6 per cent. The working population, both among males and females, is the highest at Dhanore and lowest at Mithbaon.

In Table No. 3.8 is given the distribution of the dependent population in various categories. In the bottom line of the Table, the incidence

TABLE No. 3.7.

Showing working population as proportion of the total population.

Age group in years	Bori per cent	Dhanore per cent	Mirajgaon per cent	Mithbaon per cent	Mudalgi per cent	Nalwar per cent	All Centres per cent
MALE							
18—47	96.4	99.5	97.2	83.2	98.5	95.0	96.0
48—52	91.8	99.2	94.7	92.9	92.5	94.3	94.3
53—57	87.7	96.6	83.1	90.2	92.2	88.1	89.3
58 & above	65.4	89.6	48.9	57.7	81.8	70.9	67.4
Total	92.9	98.5	91.1	79.4	96.3	92.6	92.6
FEMALE							
18—47	70.7	93.8	75.3	67.6	81.2	79.6	78.6
48—52	76.4	93.9	63.7	66.0	76.7	71.7	74.3
53—57	70.7	83.8	61.9	56.1	66.1	63.0	65.2
58 & above	46.0	58.7	33.3	31.1	45.3	37.8	40.7
Total	67.7	90.6	70.2	59.9	76.0	74.5	73.2

TABLE No. 3.8.

Distribution of dependants according to category of dependency.

Categories of dependency	Bori per cent	Dhanore per cent	Mirajgaon per cent	Mithbaon per cent	Mudalgi per cent	Nalwar per cent	All Centres per cent
<i>Children</i>							
Too Young	41.4	59.0	43.7	30.1	53.8	49.5	45.9
Educands	12.3	17.1	18.7	25.9	16.7	11.9	17.2
Engaged in house- hold work	8.5	12.8	7.8	0.7	2.0	4.7	6.3
Others	12.2	2.3	6.4	4.3	6.5	10.1	6.9
All Children	74.4	91.2	76.6	61.0	79.0	76.2	76.3
<i>Adult Females</i>							
Engaged in house- hold work	18.8	3.3	16.8	14.6	11.2	14.7	13.3
Others	3.2	2.9	0.6	11.4	6.0	4.2	4.6
All adult females	22.0	6.2	17.4	26.0	17.2	18.9	17.9
Adult Males	3.6	2.6	6.0	13.0	3.8	4.9	5.8
Number of depen- dants per 100 male workers of age above 13	155.9	155.9	188.0	391.2	147.2	162.4	182.0

of dependency is shown as the number of dependants per 100 adult male workers of age above 13. In the rest of the Table, the dependants are shown distributed into various categories of dependency. At four of the six centres, namely, Bori, Dhanore, Mudalgi and Nalwar, the number of dependants per 100 male workers of age above 13 lies between 150 and 160. At Mirajgaon, the number of dependants is 188 and at Mithbaon the number is 391. Quite obviously therefore Mithbaon is an extremely exceptional case in many ways. At four of the six centres, namely Bori, Mirajgaon, Mudalgi and Nalwar, between 75 and 80 per cent of the dependants are children. At Dhanore, over 90 per cent are children while at Mithbaon only about 60 per cent are children.

The variations between the centres as regards the proportion of the working population, the incidence of dependency and the composition of the dependants are partly explained by the differences in the age structure of the populations at different centres. For a fuller explanation, one must examine the economic factors which it is outside the scope of the present investigation.

age below 13 were found. This is important because such marriages are prohibited by law. At Dhanore and Mithbaon, there were practically no married women of age below 13.

In the next age group of 13-17, the proportions of unmarried women at the four centres other than Dhanore and Mithbaon lay roughly between 20 and 30 per cent while at Dhanore and Mithbaon, the proportions of unmarried in this age-group were around 80 per cent. It is thus obvious that the population at Dhanore and Mithbaon in its marital status composition differed radically from the population at the other four centres. Compared with the other four centres, the women at Dhanore and Mithbaon married at considerably later ages.

There were minor differences within the group of four centres other than Dhanore and Mithbaon in respect of the proportions of unmarried women in the two lowest age-groups. But they were probably on account of the possible inaccuracies in the age reporting particularly at the critical age of 13. Between Dhanore and Mithbaon, the proportion of unmarried in all the age-groups upto 18-22 were larger at Mithbaon than at Dhanore. But in later age-groups, the proportions of unmarried women at Dhanore were larger than at Mithbaon. In fact, these proportions at Dhanore appeared to be so large that here cases of women remaining unmarried all their lives were not altogether unknown as they would be at other centres. It will be remembered that the village community at Dhanore was overwhelmingly composed of the Bhils. The special features in relation to the marital status of the female population at this centre must therefore be attributed to the Bhil community. On the other hand, the advanced age of marriage at Mithbaon was mainly the result of the influence of the city of Bombay to which the population at Mithbaon was greatly subject.

The age at first marriage of the married women in various age groups is set out in Table No. 4.2. It will be seen that in Bori and Mirajgaon, of the married women 33.8 and 31.5 per cent respectively had married at age 8 or below. In Mudalgi 43.9 per cent were married at the age. In Dhanore and Mithbaon less than 5 per cent were married at age 8 or below. In the four centres besides Mithbaon and Dhanore 75 to 81 per cent women were married before the age of 13 while in Mithbaon about 44 per cent and in Dhanore only about 10 per cent were married before 13.

Marriages at age 16 or above were less than 2 per cent in the 2 Kannada speaking centres of Nalwar and Mudalgi while in Mirajgaon and Bori, the corresponding percentages were about 3 and 6 respectively. In Dhanore we had the highest percentage namely 70 of those marrying at age 16 or above; next stood Mithbaon with 25 per cent of its women marrying at age 16 and above. If we examine the percentages of women in

TABLE No. 4.2.

Married women in different age groups classified according to age at first marriage.

Present Age	Percent with age at first marriage					Percent with age at first marriage					Percent with age at first marriage				
	8 and below	9-	13-	16 and above	Total Number	8 and below	9-	13-	16 and above	Total Number	8 and below	9-	13-	16 and above	Total Number
	BORI					DHANORE					MIRAJGAON				
Below 13	45.7	54.3	—	—	105	60.0	40.0	—	—	5	64.4	35.7	—	—	115
13—17	25.6	35.9	33.3	5.1	118	21.7	18.3	20.0	40.0	60	19.9	48.0	29.4	2.7	223
18—22	21.0	43.7	21.4	13.9	309	2.6	4.2	17.0	76.2	269	16.5	53.2	25.0	5.4	318
23—27	29.1	44.2	18.1	8.5	200	4.0	5.6	19.3	71.0	323	26.9	52.7	16.3	4.1	245
28—32	30.9	51.3	12.4	5.5	279	3.8	6.7	14.3	75.2	242	32.3	48.5	15.1	4.2	239
33—37	32.7	48.4	13.2	5.7	159	3.8	4.5	13.4	78.3	160	26.6	54.8	15.3	3.4	178
38—	41.7	45.6	8.6	4.1	740	4.2	4.4	24.7	66.7	678	40.1	49.1	9.5	1.3	633
Total	33.8	46.1	13.7	6.3	1805	4.6	5.6	19.6	70.2	1738	31.5	49.7	15.8	2.9	1840
	MITHBAON					MUDALGI					NALWAR				
Below 13	—	—	—	—	—	—	Data not available			—	Data not available			—	
13—17	—	9.5	52.4	38.1	22	13.8	31.1	32.4	0.7	155	18.5	51.6	29.3	0.6	341
18—22	0.6	8.8	32.7	57.9	163	26.1	35.2	34.7	4.0	208	19.5	49.9	29.1	1.5	389
23—27	1.0	13.2	42.9	42.9	209	35.4	33.5	26.1	5.0	173	17.7	49.1	30.4	2.8	324
28—32	1.1	26.0	35.9	37.0	183	45.4	29.0	24.0	1.6	197	21.0	53.6	22.9	2.6	269
33—37	1.3	30.0	36.9	31.9	158	47.4	34.5	15.5	2.6	122	31.7	47.1	19.5	1.8	222
38—	8.1	54.7	26.9	10.3	903	56.1	35.5	8.2	0.2	480	34.1	49.0	15.8	1.2	865
Total	4.9	38.7	31.8	24.6	1638	43.9	33.6	20.6	1.9	1335	25.6	49.8	23.0	1.6	2411

different quinquennial age groups marrying at age 16 or above, it will be seen that in Dhanore the percentage of such women was quite high for all age groups above 18. This means that at Dhanore, the practice of late marriage such as at age above 16, has been common for many years. In fact it appears to be a characteristic feature of the Bhil community which is the majority community at Dhanore and is thus likely to be indeed age-old. On the other hand, it will be seen that at Mithbaon the proportion of those married at age 16 or above is larger in younger age groups than in older ones. This indicates the possibility that at Mithbaon the age at marriage has advanced in recent years. We have earlier referred to the great influence which the city of Bombay exercises on this centre and it seems that here the age at marriage has considerably advanced in recent years, through this influence and through the growing education of women which is apparent at this centre. The proportions of women married at age 16 or above is larger in younger age-groups than in older ones also at Bori. It is possible therefore that here too, the age at marriage has advanced somewhat in recent years. However in younger age-groups, the proportion of women marrying at age 16 or above is rather small at Bori, and it cannot be said that such late marriages of women are very common there even today. At the other three centres, the proportion is smaller still and a late marriage is almost an exception even today.

A certain significance attaches to child marriages that is of marriages of girls of age below 14 in so far as such marriages have been prohibited by an old legislation known as the Sarda Act of 1929. The legislation was meant to be more of a recommendatory character and is known to have not been very effective in practice. In order to see how many of all the marriages since the enactment have been in contravention of the legislation, we have tried to ascertain what proportion of all the marriages reported in our investigation and which took place after 1929, were child marriages. Further in order to see whether there has been any improvement in this respect in more recent years, we have also ascertained the proportion of child marriages among marriages which took place in the last three years. In Table No. 4.3 are shown the results.

Thus it will be seen at all the centres other than Dhanore and Mithbaon, nearly 80 per cent of all the marriages contracted since 1929 were child marriages. However, judging from the experience at Bori and Mirajgaon, it seems that there has been a general improvement in this matter. At these centres, of the marriages contracted during the last three years only about 50 per cent were child marriages. Results for Mudalgi and Nalwar could not be ascertained but it is possible that a certain reduction in child marriages has occurred at these centres also. At Dhanore, child marriages have never been very common but there has also been no reduction in the small proportion of child marriages so that even today about

TABLE No. 4.3.

Showing proportion of child marriages among all marriages contracted (i) since 1929 and (ii) during last three years.

Centre	Proportion of child marriages among all marriages contracted since 1929	Proportion of child marriages among all marriages contracted during last three years
Bori	79.4	47.9
Dhanore	9.9	8.8
Mirajgaon	83.7	57.1
Mithbaon	26.6	0.8
Mudalgi	82.2	not known
Nalwar	83.2	not known

10 per cent of all marriages are child marriages. On the other hand, at Mithbaon, the improvement in recent years has been very distinct and child marriage now is almost an exception at this centre. We have already drawn attention to the special circumstances of this centre namely the large influence of the city of Bombay. But it may also be said of the other centres such as Bori and Mirajgaon where there is apparent a substantial reduction in the proportion of child marriages that the reduction is mainly due to the spread of general education and enlightenment resulting from the contact with the wider world. In particular, the education in child marriages can hardly be attributed specifically to the Sarda Act. For all practical purposes the Act has been forgotten.

Once married, a large proportion of the women naturally continued to be in the married state but the remaining were either widowed or divorced or otherwise separated from their husbands. Cases of divorce or separation were not many and we shall return to them later. In Table No. 4.4, we show what proportion of the ever-married women were ever-widowed that is to say ever experienced widowhood whether or not they later remarried. It will be seen that the proportion of everwidowed among all the evermarried women was 31.4 per cent at Bori, 32.2 per cent at Mudalgi and 33.8 per cent at Nalwar. If we examine the proportions of everwidowed in each age-group at these three centres, we find that they are higher at Nalwar than at Mudalgi and higher at Mudalgi than at Bori. The proportion of everwidowed women among all the evermarried women was the highest at Mithbaon, being 38.9 per cent. But this was mostly on account of the large number of old women to be found at this centre. Therefore if we examine the proportions of everwidowed in each age group at this centre, they are seen to be lower than those even at Bori. The high proportion of the everwidowed in the youngest age group at Mithbaon is not significant due to the small number of observation in that age group. The proportions of widowed in the different age groups were however

lower at Mirajgaon and lower still at Dhanore. The low proportions of widowed at Dhanore could be a consequence of the high age at marriage found at this centre. The relatively low proportions of widowed at Mithbaon could also be attributed to the same circumstance. The low proportions of widowed at Mirajgaon could not however be so explained.

Some of the widowed women later remarried. In Table No. 4.5 we show the proportion of everwidowed women who remarried. It will be seen that this proportion was the highest at Dhanore namely 37.5 per cent. Thus the centre at Dhanore exhibited many peculiar features in respect of the marital status of its female population, such as an advanced age at marriage, a possibly consequent low incidence of widowhood which was further reduced by a high rate of remarriage among the widows. On the other hand, widow remarriage seemed to be practically absent at Mithbaon. This centre too was characterised by an advanced age at marriage. However, here the incidence of widowhood was not as low as at Dhanore; and it remained unmitigated on account of the total absence of remarriage among the widows. The proportions of remarried among the widowed at the remaining centres were 31.6 per cent at Mudalgi, 23.7 per cent at Bori, 23.9 per cent at Nalwar and 20.2 per cent at Mirajgaon. If we examine the proportions of remarried among the widowed in different age-groups, it will be seen that, barring the centre at Mithbaon, among those widowed before age 28, generally from 60 to 75 per cent remarried. The proportion of remarried to everwidowed in the age group 28-37 varied from 40 to 60 per cent and that in the next age group of 38-47, varied from about 20 to 40 per cent.

It may be of interest to examine whether the incidence of remarriage among the widowed varied in different castes. The relevant data are given in Table No. 4.6. It will be seen that remarriage of widows is in general less common among the so-called advanced castes and the artisan castes than among other intermediate castes and scheduled and backward castes.

As earlier remarked, the incidence of divorce or otherwise separation was on the whole small. In Table No. 4.7 we show such cases as per cent of all married and remarried women. In fact, we have included among these cases, all cases of doubtful marital status including prostitutes and concubines. It will be seen that at three centres, namely, Dhanore, Mithbaon and Bori the proportion of these cases was between 2 and 3 per cent and at Mirajgaon and Nalwar it was between 4 and 5. However, the proportion of such cases at Mudalgi appears exceptionally large, being 8 per cent. One reason for this large proportion was an unusually large number of prostitutes reported at Mudalgi. In accordance with a certain custom prevailing among them, they reported as having been first married

TABLE No. 4.4.

Everwidowed women shown as per cent of evermarried women.

Age-group years	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married
—17	2.2	224	—	65	1.5	340	9.1	22	2.7	227	4.4	432
18—27	8.8	509	6.1	592	5.7	563	7.6	372	11.5	391	16.2	750
28—37	21.7	438	16.9	402	18.0	417	21.6	342	28.0	321	26.2	519
38—47	38.5	286	19.4	335	37.4	321	36.5	288	45.0	209	50.3	414
Above 47	76.2	454	50.9	344	67.7	316	69.8	614	78.8	288	80.2	495
Total	31.4	1911	19.8	1738	22.7	1957	38.9	1638	32.2	1436	33.8	2610

TABLE No. 4.5.

Showing remarried women as per cent of everwidowed women.

Age-group	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Remarried per cent	Number ever-widowed	Remarried per cent	Number ever-widowed	Remarried per cent	Number ever-widowed	Remarried per cent	Number ever-widowed	Remarried per cent	Number ever-widowed	Remarried per cent	number ever-widowed
—17	20.00	5	—	—	40.00	5	—	2	93.33	6	57.89	19
18—27	68.89	45	75.00	36	56.25	82	3.57	28	73.33	45	59.84	122
28—37	56.84	95	61.76	68	40.00	75	1.35	74	60.00	90	38.97	136
38—47	24.77	109	53.85	65	18.33	120	—	105	41.49	94	22.60	208
48—	8.38	346	14.29	175	8.61	213	0.47	429	7.93	227	6.82	397
Total	23.67	600	37.50	344	20.22	445	0.67	638	31.60	462	23.92	882

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TABLE No. 4.6

Showing remarried women as per cent of everwidowed women in different castes.

	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		ALL SIX CENTRES	
	Remarried per cent	Number ever widowed	Remarried per cent	Number ever widowed	Remarried per cent	Number ever widowed	Remarried per cent	Number ever widowed	Remarried per cent	Number ever widowed	Remarried per cent	Number ever widowed	Remarried per cent	Number ever widowed
Brahmins	0.0	18	—	—	0.0	7	0.0	10	0.0	8	0.0	5	0.0	48
Advanced Hindus	14.3	35	0.0	2	10.0	40	0.0	8	0.0	6	5.6	18	9.2	109
Marathas	15.1	165	37.5	8	11.6	129	6.1	328	20.0	15	0.0	4	7.4	649
Intermediate Hindus (Artisans)	22.2	36	60.0	5	15.0	20	0.0	6	20.0	10	5.9	17	18.1	94
Intermediate (Hindus (others))	26.7	135	55.0	20	23.9	92	7.7	260	36.9	333	24.3	371	23.6	1211
Mahars	40.2	82	38.9	18	35.4	48	0.0	26	—	—	31.4	105	32.3	279
Mang, Dhor, Bhangi, etc.	26.7	30	50.0	8	34.3	70	—	—	17.6	17	0.0	6	28.8	131
Backward and Primitives	47.5	40	36.5	277	20.0	15	—	—	16.2	37	27.5	178	32.5	547
Other than Hindus	13.6	59	0.0	6	8.3	24	—	—	25.0	36	20.8	178	18.5	303
Total	23.8	600	37.5	344	20.3	445	6.4	638	31.7	462	24.1	882	21.5	3371

TABLE No. 4.7.

Showing divorced, separated, etc., women as per cent of all married and remarried women.

Age-groups	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Divorced, separated, etc., per cent	Total married	Divorced, separated, etc., per cent	Total married	Divorced, separated, etc., per cent	Total married	Divorced, separated, etc., per cent	Total married	Divorced, separated, etc., per cent	Total married	Divorced, separated, etc., per cent	Total married
—17	0.9	218	3.2	63	3.7	325	—	20	3.7	215	2.2	415
18—27	1.6	487	2.5	569	5.4	521	2.4	387	8.9	348	3.7	676
28—37	3.7	383	2.4	367	4.2	357	2.7	262	9.2	261	7.4	406
38—47	4.6	195	0.3	304	3.7	215	5.2	174	6.2	145	5.4	240
48—	4.6	131	4.9	184	4.8	116	5.1	178	16.18	68	9.6	114
Total	2.8	1414	2.4	1487	4.4	1534	3.4	971	8.0	1087	4.8	1851

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to a certain diety and then securing the divorce from Him, having taken to the profession.

We shall next examine the marital status of the male population at different centres. In Table No. 4.8 we show the proportions of unmarried men in successive age groups for different centres. As in the case of the marital status of the female population, so here the two centres at Dhanore and Mithbaon distinguish themselves from the remaining four centres. At both these centres, the proportions of unmarried men in different age groups were much higher than at other centres. Nevertheless, between Dhanore and Mithbaon, it was Mithbaon that showed really high proportions of unmarried men in all age-groups. For instance, even in the age-group of 18-22, the proportion of the unmarried at Mithbaon was as high as 95.0. The same proportion at Dhanore was only 53.0 per cent and at other centres it varied from 48.0 to 30.5 per cent. Similarly, in the next age-group of 23-27, at Mithbaon as many as 32.9 per cent of the men were unmarried. The same proportion at Dhanore was only 8.6 and was not the highest among the remaining centres. Among the remaining centres the proportions were between 4.0 to 16.1 per cent. It is clear therefore that while Dhanore was not quite markedly distinguishable from the other four centres, the centre at Mithbaon appeared to be radically different in respect of the marital status of its male population in different age-groups. The reason for this markedly advanced age of marriage among the males seems to be their constant contact with the city of Bombay.

In Table Nos. 4.9 to 4.11 are given particulars about the class of evermarried men. As in the case of women, we might first compare the proportions of everwidowed in the surveyed centres. In Table No. 4.9 are set out the proportions of everwidowed men among the evermarried men in various quinquennial age groups. The proportions of the everwidowed among the evermarried men were between 45 and 47 per cent at the four centres at Bori, Mirajgaon, Mudalgi and Nalwar. If we compare these proportions in each age group, it seems that they were somewhat lower at Mirajgaon and Nalwar than at Bori and Mudalgi. The proportion of the widowed was the lowest at Mithbaon and also relatively low at Dhanore. Both these could be consequences of the high age at marriage observed at these two centres. A certain difference between these two centres might however be noted. As was observed earlier, Dhanore had the lowest proportion of widows among the evermarried women and though this was also low at Mithbaon, it was much higher than at Dhanore. On the other hand, as seen above, Mithbaon had the lowest proportion of everwidowed among evermarried men and though this was also low at Dhanore, it was much higher than that at Mithbaon.

In Table No. 4.10 are given the proportions of the remarried among the everwidowed men. As in the case of similar proportions among ever-

TABLE No. 4.8.

Showing percentage of unmarried men in different age groups.

Age-group	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Unmarried per cent	Total men	Unmarried per cent	Total men	Unmarried per cent	Total men	Unmarried per cent	Total men	Unmarried per cent	Total men	Unmarried per cent	Total men
—12	98.9	1124	99.8	1677	99.0	1399	100.0	1003	100.0	903	98.6	1526
13—17	82.6	184	94.1	322	80.9	256	99.3	296	74.5	161	85.4	301
18—22	48.0	256	53.0	317	82.4	309	95.0	182	30.5	226	42.3	348
23—27	16.1	217	8.6	302	7.8	269	32.9	88	4.0	149	10.8	344
28 and above	3.3	1260	0.7	1095	2.8	1104	1.2	646	0.9	817	2.2	1388
Total	48.1	3041	58.7	3713	52.3	3337	68.0	2215	49.0	2256	50.6	3902

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TABLE No. 4.9.
Everwidowed men shown as per cent of evermarried men.

Age-group years	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married	Ever- widowed per cent	Number ever- married
—17	—	44	—	23	1.6	63	—	2	2.4	41	3.0	66
18—27	5.4	315	9.0	425	5.5	457	4.5	67	6.3	300	8.7	505
28—37	20.1	457	16.5	460	12.8	407	6.6	165	19.2	302	17.1	568
38—47	34.0	391	25.3	293	27.5	280	18.5	135	35.3	252	26.3	372
48 and above	47.2	368	39.5	334	46.8	385	30.8	338	46.1	256	45.1	417
Total	26.4	1575	20.8	1535	21.1	1592	20.2	707	24.7	1151	22.2	1928

TABLE No. 4.10.

Showing remarried men as per cent of everwidowed men.

Age-group	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Remarried per cent	Number ever- widowed	Remarried per cent	Number ever- widowed	Remarried per cent	Number ever- widowed	Remarried per cent	Number ever- widowed	Remarried per cent	Number ever- widowed	Remarried per cent	Number ever- widowed
—17	—	—	—	—	100.00	1	—	—	—	1	—	2
18—27	64.71	17	86.84	38	60.00	25	83.33	3	78.95	19	70.45	44
28—37	81.52	92	92.11	76	84.62	52	63.64	11	87.93	58	79.38	97
38—47	73.68	133	93.24	74	85.71	77	68.00	25	88.76	89	74.49	98
48—	54.02	174	67.42	132	53.89	180	43.27	104	63.56	118	48.40	188
Total	66.83	416	81.56	320	66.57	335	48.95	143	77.19	285	63.40	429

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TABLE No. 4.11.

Showing divorced and separated men as per cent of all married and remarried men.

Age-group	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Divorced & separated, per cent	Total married	Divorced & separated, per cent	Total married	Divorced & separated, per cent	Total married	Divorced & separated, per cent	Total married	Divorced & separated, per cent	Total married	Divorced & separated, per cent	Total married
—17	—	44	15.0	20	1.6	62	—	2	—	40	—	64
18—27	2.0	303	1.2	415	1.4	441	1.6	64	0.3	295	1.2	486
28—37	1.6	433	0.7	451	3.1	387	3.2	156	3.1	286	0.5	545
38—47	2.0	349	0.3	287	2.3	263	3.3	123	1.7	238	1.5	342
48—	0.3	287	1.0	288	1.3	298	0.7	277	1.9	209	0.6	318
Total	1.5	1416	1.0	1461	2.0	1451	1.9	622	1.8	1068	0.9	1755

widowed women, we see that this proportion was the highest at Dhanore and lowest at Mithbaon; but at Mithbaon the remarriage of widowed men was not totally absent as was the remarriage of widowed women. The proportions of remarried among the everwidowed were of course everywhere higher among men than among women and this was true in all age groups. But an important difference between the proportions of the remarried among the widowed men and women was that this proportion in successive age groups declined much more rapidly among women than among men. This meant that the possibility of remarriage among women was largely confined to those widowed at relatively early ages, while among men the possibility remained considerable even at relatively later ages.

Proportions of divorced and separated men among the married including remarried in different quinquennial age groups are presented in Table No. 4.11. It will be seen that in all the centres the divorced and separated men formed less than 2 per cent of the married men.

Cases of bigamy were found at all the centres but such cases were more frequent at Dhanore, Bori and Nalwar than at Mirajgaon, Mithbaon and Mudalgi. In Table No. 4.12, we show the proportion of bigamous men among all married men in different age groups. It will be seen that at Dhanore bigamy would appear almost common. Here among the married men of age above 37, nearly 10 per cent had two living wives.

Stated reasons of bigamy have been classified in Table No. 4.13. In a large number of cases, the men concerned could not give any reasons. A majority of the bigamous men at Mirajgaon said that they had a second wife because they had no issue or no son from their first wife. In Bori, Nalwar and Dhanore, the practice was common and no reasons appeared necessary. Nevertheless, in Dhanore, many said that having two wives was useful for farm work. At Bori, we came across 12 cases where men had first married a child bride and finding her to be too young, had married a second wife. The first wife stayed with her parents until she came of age and later joined the husband along with the second wife.

The bigamous cases have been classified by caste in Table No. 4.14. Though cases of bigamy were found in almost all castes, they were more common among Bhils at Dhanore and Lingayats at Mudalgi and Nalwar. At Nalwar, bigamy was also common among Muslims and Lamans. At Bori and Mirajgaon, cases of bigamy were found among Marathas and scheduled castes.

Recently, in 1946, the Government of Bombay enacted a legislation preventing Hindu Bigamous Marriages. Whether as a result of this legislation, the bigamous marriages have been apparently less frequent in recent years. For instance, in the special enquiry we conducted regarding the marriages which took place during the three years preceding the enquiry, we did not find a single case of bigamous marriage.

TABLE No. 4.12.

Showing bigamous men as per cent of all married men.

Age-group	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	Bigamous males per cent	Number of married males	Bigamous males per cent	Number of married males	Bigamous males per cent	Number of married males	Bigamous males per cent	Number of married males	Bigamous males per cent	Number of married males	Bigamous males per cent	Number of married males
—17	—	44	—	20	—	62	—	2	—	40	—	64
18—27	2.0	303	0.7	415	0.2	441	—	64	—	295	1.2	486
28—37	2.3	433	4.0	451	1.3	387	—	156	0.7	286	4.9	545
38—47	4.0	349	9.1	287	3.0	263	1.6	123	2.1	238	3.5	342
48—	4.2	287	10.4	288	3.7	293	1.1	277	1.9	209	3.5	318
Total	3.0	1416	5.3	1461	1.7	1451	0.8	622	1.0	1068	3.2	1755

TABLE No. 4.13.

Cases of bigamy classified by stated reasons.

Reasons	Bori	Dhanore	Miraj- gaon	Mith- baon	Mudalgi	Nalwar	Total
No issue from 1st wife	3	9	10	1	—	3	26
No son	2	3	6	1	—	1	13
Not getting well with 1st wife	1	1	—	—	—	1	3
First wife too young	4	—	1	—	—	1	6
First wife ill or disabled	—	1	—	1	—	1	3
For agricultural purposes	—	28	—	—	—	—	28
Reason not given	32	35	8	2	11	49	137
Total number	42	77	25	5	11	56	216

TABLE No. 4.14.

Cases of bigamy classified by caste.

Caste	Number of bigamous marriages						Total
	Bori	Dhanore	Miraj- gaon	Mith- baon	Mudalgi	Nalwar	
Brahmins	1	—	—	—	—	—	1
Advanced Hindus	3	—	1	—	—	1	5
Marathas	11	—	9	5	—	—	25
Intermediate Hindus (Artisans)	2	4	—	—	9	19	34
Intermediate Hindus (Others)	5	2	4	—	9	19	39
Mahars	10	1	2	—	—	7	20
Mang, Dhor, Bhangi, etc.	5	—	6	—	—	—	11
Backwards & primitives	4	74	2	—	—	18	98
Other than Hindus	1	—	1	—	2	11	15
Total number	42	81	25	5	20	75	248

In Table No. 4.15, we present data regarding the difference between the ages of husband and wife. In this Table, the evermarried women are grouped into decennial age groups and the women in each age group are distributed according to the difference between their ages and the ages of their husbands. Here, as in many other respects, the populations at Dhanore and Mithbaon appear contrasted. The difference between the ages of husband and wife is small at Dhanore and large at Mithbaon. For instance, in the case of 83.5 per cent of all the women at Dhanore, this difference was of 6 or fewer years. On the other hand, at Mithbaon, only 32.8 per cent of the women had so small a difference. At the other extreme, in the case of only 3.9 per cent of the women at Dhanore the difference was 15 years or more while the same was true in the case of 18.6 per cent of all the women at Mithbaon. This large difference between the ages of husband and wife was partly responsible for the high incidence of widowhood at Mithbaon so that in spite of the advanced age at marriage at this centre, the incidence of widowhood there was no smaller than at Dhanore.

Another fact appearing from the Table is that the difference between the ages of husband and wife was smaller for younger women than for older women. This is true of all the centres except Dhanore. For instance, it will be seen that at all the other centres, the proportion of women having a difference of 6 or fewer years between their ages and the ages of their husbands is larger in younger age groups than in older age groups. This may be taken as an evidence that the difference between the ages of husband and wife has been narrowing in recent years. This seems plausible. We should note nevertheless that the above Table is based on all ever-married women. These include remarried as well as widowed women. Now for obvious reasons the difference between the ages of husband and wife is larger in the case of remarried women than in the case of once married. Also because a large difference between the ages of husband and wife is itself a contributory cause of widowhood, the difference is also larger in the case of widows than in the case of married. This may be seen from Table No. 4.16. In this Table, the women have been classified as once-married, widowed and twice or more often married. The Table then shows, for each category of women, the proportion of women who had a difference of 15 or more years between their own ages and the ages of their husbands.

The information for the two centres at Dhanore and Nalwar was inadequate in some respects and could not be included in the above Table. It is clear from the Table that the proportion of women with a difference of 15 or more years between their ages and the ages of their husbands is larger among the widows than among the once-married and still larger among the twice or more often married. These two categories

TABLE No. 4.15.

Percentage distribution of evermarried women in different age groups according to the difference between their ages and the ages of their husbands.

Age in years	Per cent of women with difference between ages of husband & wife in years.					Per cent of women with difference between ages of husband & wife in years.					Per cent of women with difference between ages of husband & wife in years.				
	up to 6	7-10	11-14	15 & more	Total number	up to 6	7-10	11-14	15 & more	Total number	up to 6	7-10	11-14	15 & more	Total number
	BORI					DHANORE					MIRAJGAON				
up to 17	53.0	27.4	13.7	5.9	224	84.2	10.0	2.9	2.9	71	66.6	27.7	3.3	2.4	340
18—27	44.3	36.1	9.6	10.0	509	87.3	8.0	2.0	2.7	566	56.6	31.8	5.7	5.9	568
28—37	41.9	36.8	8.9	12.4	438	82.8	10.9	3.0	3.3	396	44.8	38.5	6.5	10.2	417
38—47	50.9	31.5	4.5	13.1	286	83.1	8.5	4.0	4.4	248	31.3	46.7	9.9	12.1	321
above 47	50.3	34.7	3.4	11.6	454	72.7	11.4	6.8	9.1	176	33.8	47.7	9.9	8.6	316
Total	46.9	34.2	8.0	10.9	1911	83.5	9.4	3.2	3.9	1461	48.1	37.4	6.8	7.7	1957
	MITHBAON					MUDALGI					NALWAR				
up to 17	23.8	52.4	14.3	9.5	22	55.6	30.0	9.8	4.6	155	Adequate data not available.				
18—27	46.4	35.8	7.4	10.4	372	40.8	40.5	10.3	8.4	381					
28—37	34.6	34.9	12.1	18.4	342	34.9	40.5	9.9	14.7	319					
38—47	29.0	37.9	21.2	11.9	288	24.0	39.8	17.8	18.4	200					
above 47	25.5	35.1	12.3	27.1	614	18.3	34.3	20.6	26.8	580					
Total	32.8	36.0	12.6	18.6	1638	34.6	38.0	13.1	14.3	1395					

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TABLE No. 4.16.

Proportion of women with difference of 15 or more years between their ages and the ages of their husbands.

Marital status	Bori per cent	Mirajgaon per cent	Mithbaon per cent	Mudalgi per cent
Once-married	8.3	5.8	12.6	7.4
Widowed	13.4	10.3	27.8	28.2
Twice or more often married	27.0	33.7	50.0	81.5

of women, namely widowed and twice or more often married, naturally appear more in the older age groups than in the younger groups. It is possible therefore that part of the apparent narrowing down of the difference between the ages of husband and wife in the younger age groups is on this account and hence may not be real.

CHAPTER V

MARRIAGE

We have earlier referred to a special enquiry we did in respect of the marriages which had taken place during the three years preceding the enquiry. The enquiry was confined to only the nuclear villages of the centres covered by our investigation. Our intention was to cover all marriages which had taken place at the six nuclear villages during the three years preceding the enquiry. This was done at Bori, Dhanore and Mithbaon. At the three remaining centres, we failed to cover all marriages occurring during the three years. At Mirajgaon, the investigator covered marriages occurring only during two years rather than three. This was by mistake. At Nalwar, the investigator obtained information regarding marriages occurring during only one year. That was for want of time. At Mudalgi also the special enquiry into marriages had to be left incomplete as the investigator went on medical leave. In Table No. 5.1, we give the number of marriages regarding which information was obtained during this special enquiry.

TABLE No. 5.1

Number of marriages covered by the special enquiry.

Village	Number of marriages of boys	Number of marriages of girls	Total number of marriages
Bori	67	52	119
Dhanore	68	23	91
Mirajgaon	30	26	56
Mithbaon	67	57	124
Mudalgi	12	14	26
Nalwar	29	14	43
Total	273	186	459

In the above Table, the marriages have been divided into two categories according as they were reported as of boys or of girls from the reporting families. Customarily, the married girls leave their father's home soon after marriage or sometime later. Once they left their father's home, they were no more regarded as members of the father's family and therefore did not appear in our General Family Schedule. Their marriages were not therefore reported in our enquiry. Among the reported marriages

there is therefore a natural excess of marriages reported as of boys from the reporting families.

If we consider the two categories of marriages together, convert them to annual basis and relate the total annual number of marriages to the total population, it seems that the total annual number of marriages per 1000 population lies between 6 and 8 for all the villages except Bori. At Bori, the figure works out to be nearly 12 per 1000 per annum.

In the special enquiry into these marriages, we had enquired about the home villages of the marrying partners and in particular how far apart they were from one another. In Table No. 5.2, we have classified the reported marriages according to the distance between the villages of the marrying partners.

TABLE No. 5.2.

Marriages classified according to the distance between the home villages of the marrying partners.

Distance in miles	Marriages per cent
Same village	20.8
Upto 5 miles	16.3
6—10	18.5
11—15	9.4
16—20	9.2
21—25	4.6
26—50	9.2
Above 50 miles	12.0
Total number	459

It will be seen that nearly 21 per cent of all marriages were between partners living in the same village. In another nearly 35 per cent cases, the distance between the home villages of the partners was less than 10 miles. In only 12 per cent cases the distance was more than 50 miles. It is obvious therefore that in a large number of cases a person marries within a small radius from its home village. This is as it should be as marriage requires sufficient acquaintance or mutual knowledge between the two families.

Apart from the fact that a number of marriages take place between families either living in the same village or in villages not far apart, in a number of cases the marrying partners also have previous family relations. The closest relation is that between cross-cousins. In Table No. 5.3, we have classified the marriages into three according to the relations between

the marrying partners or their families. We have made three classes : (i) marrying partners related as first or second cross-cousins; (ii) marrying partners more distantly related including intimate contact between their families; (iii) without any previous relation or contact between the two families. We give this classification of the marriages cross-classified by castes.

TABLE No. 5.3.
Marriages classified by caste and previous relation between the marrying partners.

Caste	First or second cross-cousins	More distant relations or intimate contact between the families	No previous knowledge or acquaintance	Total number of marriages
	per cent	per cent	per cent	
Brahmins & other advanced castes	7.9	2.6	89.5	38
Marathas	19.2	15.1	65.7	73
Artisan castes	31.8	17.1	51.1	41
Other intermediate castes	14.3	7.6	78.1	119
Scheduled castes	32.0	12.0	56.0	50
Backward and Primitive castes	16.3	5.4	78.3	92
Other than Hindus	21.7	15.2	63.1	46
Total	19.2	10.0	70.8	459

It will be seen that considering all marriages, nearly 20 per cent are between first or second cross-cousins and nearly 70 are between families totally unacquainted. The proportion of cross-cousin marriages is small among Brahmins and other advanced castes while it is large among artisan castes and also the scheduled castes. Among these castes, nearly one-third of all marriages are between cousins.

Which of the two sides, bride's or bridegroom's, makes the marriage proposal in the first instance? We had asked this question and of the 273 families who reported marriages of boys from their families, only about 32 per cent said that the proposal came from the girl's side. In the remaining cases, the proposal had been made from the boy's side. In the same way, of the 186 families who reported marriages of girls from their families, about 27 per cent said that they made the original proposal. There is thus a reasonable agreement between the reports of the two sides and we may take it that approximately in 30 per cent cases, the proposal

is made by the bride's side and in the remaining about 70 per cent cases, it is made by the bridegroom's side.

The position in this respect is not the same in all castes. In Table No. 5.4, we have compared the different caste groups in this respect. The Table shows in what proportion of the marriages reported from each caste group, the proposal was made by the bride's side.

TABLE No. 5.4.

Per cent of marriages in which the proposal was made by the bride's side.

Caste	Per cent of marriages
Brahmins and other advanced castes	73.7
Marathas	49.3
Artisan castes	41.5
Other Intermediate castes	40.3
Scheduled castes	8.0
Backward and Primitive castes	1.1
Other than Hindus	19.6
Total	31.2

It is obvious from this Table that among Brahmins and other advanced castes, the marriage proposal usually comes from the bride's side while among Scheduled, Backward and Primitive castes as also among non-Hindus, the proposal comes primarily from the bridegroom's side. If one may regard the side making the proposal as inferior, it seems that the women enjoy a much better status among the backward and primitive castes than among the advanced castes.

A majority of the marriages are settled with the consent of parents or guardians only. Nevertheless, it is noteworthy that in nearly 40 per cent of the marriages of the boys, the families reported that the bridegrooms were explicitly consulted and had consented. In the case of marriages of girls however in only about 15 per cent cases the girls were reportedly consulted and had consented. In only 15 out of the total of 459 marriages, it was reported that the marriages were settled by mutual approval and consent of the bride and the bridegroom. These cases were all from Dhanore where Bhils formed the majority community. Among Bhils, the pre-marriage relations between boys and girls appeared more liberal and even the forms of marriage seemed less rigid. There were instances where a man and a woman had stayed together as husband and wife without any formal marriage ceremony. The formal ceremony

would take place sometime later according to mutual convenience. Another form of marriage, called 'Zagada' meaning quarrel was also reported among Bhils. According to this form, the boy and the girl after mutual approval and consent would elope and stay in hiding. Knowing about this, the girl's father would demand payment of damages from the boy's father. The amount of damages was settled by arbitration and the boy and the girl were deemed married when the amount was paid. The amount was paid either in cash or by the bridegroom agreeing to stay with the father-in-law and work for him for a certain period.

Either because of this particular form of marriage or because of a strong custom, the payment of a certain amount by the bridegroom to the bride appeared almost universal at Dhanore. For instance, out of the 68 marriages of boys reported from Dhanore, in 59 cases such an amount was paid and the average payment came to a little over Rs. 300. In the other villages, the practice did not appear so universal and only a few families reported such payments. Again in all such cases, it was not the bridegroom who paid to the bride. In some cases the amount was paid by the bride to the bridegroom. Generally speaking, it was in the advanced castes that the payment was made by the bride to the bridegroom while the reverse was the case in the lower castes. In Table No. 5.5, we give the proportion of marriages in which such a payment was made and also show the average amount paid.

TABLE No. 5.5.

Proportion of marriages in which an amount was paid for the bride or the bridegroom, and the average amount paid.

Village	Per cent of marriages of boys reporting payment	Average amount paid to the bride Rs.	Per cent of marriages of girls reporting payment	Average amount paid to the bridegroom Rs.
Bori	6.0	68.7	9.6	432.5
Dhanore	86.8	301.1	8.7	12.5
Mirajgaon	30.0	182.0	11.5	320.8
Mithbaon	10.4	124.3	12.3	126.8
Mudalgi	33.3	268.7	14.3	162.5
Nalwar	37.9	233.0	14.3	287.5

Total average expenditure on marriage in different villages varied from Rs. 400 to Rs. 700 in the case of marriages of boys and from Rs. 200 to Rs. 450 in the case of marriages of girls. In Table No. 5.6, we give the average expenditure on marriages reported from each village.

TABLE No. 5.6.

Average expenditure on marriages in different villages.

Village	Average expenditure on marriages of boys Rs.	Average expenditure on marriages of girls Rs.
Bori	417.3	359.0
Dhanore	439.2	219.4
Mirajgaon	556.1	485.4
Mithbaon	637.9	368.8
Mudalgi	410.0	197.7
Nalwar	704.5	325.0

It is clear that marriages of boys are more expensive than of girls. The amount of money that the bridegroom more often pays to the bride is one reason for this. The expenditure on marriages appears particularly large when it is compared with the annual income of these families. In most cases, the expenditure on marriage is found to be more than half the annual income of the family and in many cases it is very nearly equal to its whole annual income. Such high expenditure can only be met by borrowing and marriage becomes almost a universal occasion for borrowing. In Table No. 5.7, we show the proportion of marriages where the families reported that they had incurred debt.

TABLE No. 5.7.

Proportion of marriages for which debts were incurred.

Village	Per cent of marriages of boys for which debts were incurred	Per cent of marriages of girls for which debts were incurred
Bori	70.1	48.1
Dhanore	44.1	4.8
Mirajgaon	40.0	46.2
Mithbaon	74.6	73.7
Mudalgi	25.0	14.8
Nalwar	72.4	64.8
Total	64.3	55.3

Pressure of custom and public opinion and of false family pride is such that there seems no escape from this heavy expenditure. In recent

years, there has been a growing awareness of the hardship that it causes and there have been attempts by the caste Panchayats to regulate marriage expenditure. Nevertheless, the fact is that a great part of the expenditure that is incurred is voluntary. The people like doing it. Marrying well is almost regarded as one of the chief purposes of life. Indeed they marry well, at any rate much better than they can afford, and then for several years labour in the service of the debt they incur for the purpose.

CHAPTER VI

PHYSIOLOGICAL FACTORS

Marital status assumes demographic importance because marriage gives men and women a civil status which legalizes reproduction and hence directly affects the fertility of the population. Only births to married couples are legitimate. Therefore, illegitimate births, that is births to either unmarried or widowed women, are few. For instance, no illegitimate births were reported in our investigation. Thus marriage is a social sanction for reproduction. However, the reproductive capacity of the female itself is governed and limited by certain physiological facts. We shall consider them briefly in this chapter.

For a female, it is the period between menarchy and menopause which constitutes the reproductive period of her life. The ages at menarchy and menopause therefore become directly relevant to a consideration of fertility. In Table No. 6.1, we give a distribution of the

TABLE No. 6.1.

Distribution of females according to age at menarche.

Age at menarche (years)	Number of females	Percentage
11	81	0.8
12	1817	18.2
13	2898	29.1
14	3211	32.3
15	1612	16.2
16	583	5.9
17	152	1.5
18	82	0.8
19 and over	74	0.7
Total reporting	9960	100.0
Not reporting	1181	
Total	11141	

female population covered by our investigation according to the age at menarchy. It will appear from the Table that about 10 per cent of the women did not report the age at menarchy. Most of them were old and had attained menopause. Among the rest, it will be seen that 14 is the most frequent age of attaining menarchy. The average at menarchy also

works out to be 13.8 which is nearly 14. Nevertheless it may be noted that over 40 per cent of the women reach menarchy at age 13 or earlier. At the other extreme, nearly 10 per cent are seen to reach it after age 15.

Menopause terminates the reproductive period which began with menarchy. However the age at menopause is not so clearly notable as is the age at menarchy because menopause is usually reached only gradually. In Table No. 6.2, therefore, we give a classification of the women by age and show how many women in each age group had attained menopause. There were no reported cases of a woman having reached menopause before age 33. Therefore, the Table does not show the age groups below age 33.

TABLE No. 6.2.

Proportion of women in each age group who had attained menopause.

Present age in years	Total number of women	Number of women reporting menopause	Per cent of menopause cases to all women	Successive differences of the previous column
33—37	1001	25	2.50	2.50
38—42	1021	187	18.32	15.82
43—47	818	440	53.79	35.47
48—52	843	700	83.04	29.25
53 & over	1624	1624	100.00	16.96

Thus 53.79 per cent of the women in the age group of 43-47 had reached menopause. Roughly speaking we may relate this percentage to the central age of the age group and say that about 53.79 per cent of the women of age 45 are found to have attained menopause. In other words, 53.79 per cent of all women attain menopause sometime before the age of 45. Similarly, we may say that 83.04 per cent of all women attain menopause sometime before the age 50. If we take the difference between these percentages, we may infer that about 29.25 per cent of all women reach menopause sometime between the ages 45 and 50. Such successive differences between the percentages in the fourth column of the Table are shown in its last column. That column therefore gives, in an indirect way, the distribution of all women by the age at menopause. For instance we may say that about 35.47 per cent of all women attain menopause sometime between the ages 40 and 45.

Menopause permanently terminates the reproductive period. Besides, there are periods within the reproductive period when the reproductive capacity of the female is temporarily suspended. That happens in the period of amenorrhoea following each delivery when menstruation is

temporarily suspended. We sought information on the length of this period. In order that the data may be more reliable, we confined this query to only those married women who had at least one full term pregnancy during the five years preceding the enquiry. There were 488 such women. In Table No. 6.3, we give their distribution according to the reported period of amenorrhoea following their last delivery. It will be seen that in nearly 20 per cent of the cases this period was less than 6 months and that in another about 30 per cent cases it was between 6 months and one year. In about 10 per cent cases, the period of amenorrhoea exceeded two years.

TABLE No. 6.3.

Distribution of women according to the period of ammenorrhoea.

Period of amenorrhoea	Number of women	Percentage to total
Upto 3 months	55	11.3
— 6 months	34	7.0
— 12 months	148	30.3
— 18 months	93	19.1
— 24 months	110	22.5
More than 24 months	48	9.8
Total	488	100.0

Most of the women in their period between menarchy and menopause, barring periods of amenorrhoea, reported that they experienced a regular menstrual cycle. In Table No. 6.4, we give percentages of women at different centres, who reported regular and irregular menstrual cycles.

TABLE No. 6.4.

Percentages of women reporting regular and irregular menstrual cycles.

Centre	Total number of women	Per cent reporting regular cycle	Per cent reporting irregular cycle
Bori	1298	96.0	4.0
Dhanore	1500	98.1	1.9
Mirajgaon	1178	98.8	6.2
Mithbaon	1098	89.1	10.9
Mudalgi	968	87.5	12.5
Nalwar	1343	88.7	11.3
Total	7385	92.6	7.4

It will be seen that a very large proportion of the women, over 90 per cent, reported regular menstrual cycle.

Women experiencing regular menstrual cycle may be ordinarily regarded to be fertile. However it is known that some women suffer from various forms of sterility. Besides there would be women who, though by themselves fertile, suffer from the sterility of their husbands. We have no direct data on the incidence of sterility. Nevertheless we may infer about its extent from the actual fertility performance of the women. In the sample of married women covered by our investigation, there are a number of women who had no child upto our enquiry even though they had been married for several years. In Table No. 6.5, we show what proportion of the women with a given duration of marriage had no child.

TABLE No. 6.5.

Proportion of women having no child among women of a given duration of marriage.

Duration of marriage years	Total number of women	Per cent having no child
5—9	1827	17.5
10—14	1534	7.3
15—19	1460	5.2
20—24	1114	4.7
25 & over	2618	4.7

It will be seen that the percentage of women having no child naturally decreases with the increasing duration of marriage. But for duration of marriage between 20 and 24 years, the percentage is 4.7 and it does not decrease any further for higher durations. It seems therefore reasonable to infer that 4.7 per cent or roughly 5 per cent of all women are sterile. It should be noted that they include those who for certain physiological reasons are themselves sterile and also those who though by themselves fertile suffer from the sterility of their husbands.

In the above, by a woman who had no child we meant one who did not give birth to any live born child. Among them however were some who had experienced pregnancies but who did not give birth to any live-born child. For instance there were in all 366 women of marriage durations of 10 or more years and who had not during this period given birth to any live-born child. But 30 among them, which is about 8 per cent, had experienced pregnancies. They were thus not infecund. In the above Table about 4.7 per cent appear as sterile. If from these we exclude 8 per cent of them, we are left with about 4.3 per cent women who might be regarded as infecund.

CHAPTER VII

FERTILITY

In this chapter we propose to describe the conditions of fertility of the population covered by our investigation. In the first instance, we shall do this on the basis of the number of births occurring within one year preceding our enquiry to all the women included in our investigation. There were in all 1455 such births reported to us. Before we proceed to analyse these in order to construct certain indexes of fertility, we shall check them against the births registered in the village registers. The official papers of a village contain a register of births in which all the births occurring in the village are required to be entered. However, the registration of births is known to be incomplete. By comparing the births reported in our investigation with those entered in the village register we may obtain an estimate of the extent of such under-registration.

We had enquired about the births occurring within one year preceding the enquiry to all the women included in the investigation. As mentioned above, there were in all a total of 1455 such births reported to us. However not all of them had occurred within the villages covered by our investigation. There were 233 births which had occurred outside these villages though they were to women who were resident in these villages at the time of our enquiry and hence were included in the investigation. These births would not of course be registered in the birth registers of these villages.

In Table No. 7.1 we give the number of reported births at each centre and the number of which had occurred outside the villages included

TABLE No. 7.1.

Number of births reported and the number occurring outside the villages covered by the investigation.

Centre	Number of births reported	Number of births occurring outside the village	Outside births as per cent of all births
Bori	242	34	14.0
Dhanore	326	21	6.4
Mirajgaon	240	31	12.9
Mithbaon	151	23	15.2
Mudalgi	209	45	21.5
Nalwar	287	69	24.0
Total	1455	233	15.8

in the centre. It will be seen that taking all centres together 15.3 per cent of the reported births had occurred outside these villages.

In Table No. 7.2 we show what proportion of the births occurring in the villages were not found registered in the village registers. Of the six centres covered by our investigation, no birth registers were found at two centres, namely, at Bori and Nalwar. Both these centres were in the then Hyderabad State. Besides, at the centre Dhanore, though a birth register was maintained in the village Dhanore, no registers were to be found in two of the neighbouring smaller villages included in that centre. The two centres at Bori and Nalwar and the two villages from the centre at Dhanore have therefore been excluded from Table No. 7.2. It will be seen that of the births occurring in the remaining villages covered by the investigation 24.2 per cent or nearly 25 per cent were not found recorded in the village birth registers.

TABLE No. 7.2.

Proportion of births occurring in the villages found unregistered in the village registers.

Centre	Number of births excluding those occurring outside the villages covered by the centre	Number of registered births	Unregistered births per cent
Dhanore	242*	53	21.9
Mirajgaon	209	54	25.8
Mithbaon	128	32	25.0
Mudalgi	164	41	25.0
Total	743	180	24.2

* Births among two villages nearby Dhanore for which the birth-registers were not available are excluded.

It does not seem true, as is sometimes believed, that the birth registration is more incomplete in the smaller than in the bigger villages. For instance, of the villages included in the centre at Mirajgaon, in the nuclear village of Mirajgaon itself, which is a fairly large village, 31 per cent of the births were found unregistered. On the other hand, in the smaller neighbouring villages included in that centre only 11 per cent of the births were found unregistered. In the same way, of the villages included in the centre at Dhanore, in the nuclear village of Dhanore itself, which is a large village, 28 per cent of the births were found unregistered while in the smaller villages included in that centre, and in which birth registers were maintained, only 10 per cent of the births were found unregistered. In the two remaining centres at Mithbaon and Mudalgi no

F...5.

smaller neighbouring villages were included and hence a similar comparison between the registrations in the smaller and the larger villages could not be made.

The possibility of our own record of births being incomplete remains. We may judge the extent of such underreporting by examining how many births found in the village registers were not reported to us. Fortunately only 3 such cases were found. These were out of a total of 563 births registered in the village registers where birth registers were maintained. They thus formed only about $\frac{1}{2}$ of one per cent. To this we should also add a small percentage of cases which might have escaped registration in the village registers and also reporting to us. In view of the fact that about 25 per cent, that is $\frac{1}{4}$ of the births were found unregistered and the fact that about $\frac{1}{2}$ per cent of the births registered were not reported to us, it would seem that about $\frac{1}{4}$ of $\frac{1}{2}$ per cent that is $\frac{1}{8}$ per cent of all births might have escaped both registration and reporting to us. The defect of our reporting might therefore be to the extent $\frac{1}{4}$ plus $\frac{1}{8}$ per cent that is $\frac{5}{8}$ of one per cent, that is 0.625 per cent. This is small enough and we may regard birth reporting in our investigation as more or less complete.

We may now proceed to analyse the reported births during one year and construct certain indexes of fertility of the population. One of such indexes is a measure of the number of children that may be expected to be born to 1000 females if they lived and remained married through their entire reproductive period. The computation is shown in Table No. 7.3. On the basis of the reported births during one year, the index is calculated by first computing the number of births per 1000 married women of each age. In the Table, this is done not for each single year age but for each quinquennial age group. The number of births reported to mothers in each age group are related to all the married women in that age group and converted to per 1000 females. For instance at Bori, 220.74 births per 1000 married females were reported to married females in the age group 18-22. This is an annual rate. The total number of children to be expected to 1000 married females during the quinquennium 18-22 of their lives would be approximately five times this annual rate. The total number of children to be expected to them throughout their reproductive period is therefore obtained by multiplying the annual rates for each quinquennial age group by 5 and then adding these products together. More conveniently, we may first add the annual rates together and then multiply the total by 5. This is done in the bottom line of the Table. Thus it will be seen that the number of children to be expected to 1000 married women throughout their life varies between 5050 at Nalwar and 7376 at Mudalgi. Mudalgi and Dhanore appear close together but seem very much above the other four centres whose results appear in greater harmony. The number of children that a married woman may

expect in her lifetime works out to be between 5 and 6 for these four centres. The figure of 7 and above for Mudalgi and Dhanore indeed appears too high.

TABLE No. 7.3.

Marital fertility rates per 1000 of married females in the 6 surveyed centres.

Age	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
13—17	17.39	51.72	129.19	200.00	103.45	161.59
18—22	220.74	343.51	248.30	284.81	268.42	277.93
23—27	287.23	351.79	286.34	256.98	276.32	223.83
28—32	299.21	304.93	200.00	215.28	323.35	150.00
33—37	147.29	215.28	142.86	128.21	301.08	140.24
38—42	126.05	112.50	58.82	76.09	146.07	43.21
43—47	78.95	34.72	17.70	36.14	56.60	13.33
48—52	12.99	—	—	—	—	—
Total	1189.85	1414.45	1083.21	1197.51	1475.29	1010.13
Total	5949.25	7072.25	5416.05	5987.55	7376.45	5050.65

In the above index, we presume that a woman not only lives but also remains married throughout her reproductive period. If we relax the second condition and allow for the fact that for part of her reproductive period she could be unmarried and for another part of it she might remain widowed or divorced, the number of children to be expected to her throughout her life would be smaller. That gives us another index of fertility which takes into account the prevalent marriage rates and incidence of widowhood and otherwise separation. The index when expressed per 1000 women is called total fertility and gives the number of children to be expected to 1000 women throughout their life if they were subjected to prevalent conditions governing their marital status. The computation is shown in Table No. 7.4. It is similar to the computation of the previous Table except that here in each quinquennial age group, rather than relating the births to married women only, they are related to all women in that age group. It will be seen that total fertility varies between 3856 at Mithbaon and 6148 at Mudalgi.

The difference between the number of children to be expected to a married woman throughout her reproductive period as shown in Table No. 7.3 and the number of children that she would expect if she had not necessarily remained married all through her reproductive period but were subjected to prevalent conditions governing her marital status as shown in Table No. 7.4, indicates what might be called the loss of the reproductive capacity through either late marriage or because of the contingencies of widowhood or otherwise separation. This difference per female is

about 0.7 at three of the six centres, namely, Bori, Mirajgaon and Nalwar. It is 1.0 at Dhanore, 1.2 at Mudalgi and as large as 2.2 at Mithbaon.

TABLE No. 7.4.

Fertility rates per 1000 females of various ages irrespective of their marital status.

Age	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
13—17	11.5	8.0	96.1	14.2	87.0	132.7
18—22	212.2	267.6	230.1	209.3	238.3	263.4
23—27	270.0	324.4	269.4	217.0	248.5	200.0
28—32	276.0	278.7	175.0	167.6	279.2	126.4
33—37	132.1	193.7	123.6	94.3	227.6	103.6
38—42	86.2	106.7	39.5	47.6	114.0	27.3
43—47	53.1	31.1	11.8	21.1	84.9	6.8
48—52	6.4	—	—	—	—	—
Total	1047.5	1210.2	945.5	771.1	1229.5	860.2
Total fertility per 1000 females	5237.3	6051.6	4727.2	3855.6	6147.9	4301.2

The loss of the reproductive capacity as indicated by the above seems to be somewhat exaggerated at Mithbaon on account of a possible overestimation for that centre in the number of children to be expected to 1000 married women as shown in Table No. 7.3. It will be noted that the marital fertility rate for the age group 13-17 at Mithbaon is shown to be 200 per 1000 married women. Now in point of fact there were few married women in this age group at this centre and the rate is therefore based on a small number of only 20 married women. The rate is very much in excess of the similar rates at other centres and is possibly an overestimate. Its effect becomes particularly pronounced when it is multiplied by 5 in order to obtain an estimate of the number of children to be expected during the years of 13 to 17 years. Nevertheless it remains true that the loss of reproductive capacity was the largest at Mithbaon.

In the index of total fertility, births of both the sexes are included. If instead we consider only the female births, we obtain a measure of the number of female babies that would be born to 1000 women in their life time if they did not die during their child-bearing period. These rates, called the gross reproduction rates, are presented in Table No. 7.5 for each of the surveyed centres. The rates varied from about 2 in Mithbaon to about 3.0 in Mudalgi and Dhanore. This meant that if she did not die during her child-bearing period, a woman subject to the fertility rates of the year of enquiry would produce on an average 2 to 3 females in her lifetime.

TABLE No. 7.5.
Gross reproduction rates in the surveyed centres.

Centre	Gross reproduction rate
Bori	2.61
Dhanore	2.98
Mirajgaon	2.35
Mithbaon	1.91
Mudalgi	3.02
Nalwar	2.14

If we took into account the mortality of women, we could calculate the number of female babies that would be born to a female throughout her lifetime if she were subjected to given fertility and mortality conditions. This measure is called the net reproduction rate. We could not calculate the net reproduction rates for each one of the surveyed centres as we had no data on conditions of mortality at these centres. Instead, we propose to use the life table based on the 1951 Census for the rural area of the west zone of India in which lay all the surveyed centres and compute a net reproduction rate for the combined data of the six centres. Calculation of the net reproduction rate is shown in Table No. 7.6. It will be seen that the net reproduction rate, for the combined population of the six centres, works out to be 1.29.

TABLE No. 7.6.
Computation of the net reproduction rate and the length of generation for females.

(Combined data for the centres)

Age	Number of females	No. of births during the year of enquiry	Fertility rate per 1000 females	Pivotal age	Survival rate per person	Column 4 × 6	Column 5 × 7
13—17	1701	106	62.32	15	0.59825	36.95	554.25
18—22	1797	431	239.84	20	0.57582	138.10	2762.00
23—27	1491	383	256.87	25	0.54785	140.73	3518.25
28—32	1414	307	217.11	30	0.50780	110.24	3307.20
33—37	1001	140	139.86	35	0.45670	63.87	2235.45
38—42	1021	67	66.62	40	0.40301	26.45	1058.00
43—47	818	20	24.45	45	0.38897	8.53	383.85
48—52	843	1	1.19	50	0.29527	0.35	17.50
Total		1455	1007.26			525.22	13836.50
Upper row × 5			5036.30			2626.10	69182.00

(From Col. 4) G.R.R. per female = 5.03630×0.49148 (sex ratio) = 2.47524.

(From Col. 7) N.R.R. per female = 2.62610×0.49148 (sex ratio) = 1.29063.

(From Col. 8) $R_1 = 69.18200$; $R_0 = 2.62610$.

Then the length of generation = $\frac{R_1}{R_0} = 26.34401$.

A similar rate could be calculated for the male population by relating the male births to their fathers. It is called the paternal net reproduction rate in contrast to the maternal net reproduction rate computed in the above. The computation of the paternal net reproduction rate is shown in Table No. 7.7. It may be mentioned that the male births are those reported by the women who were resident in the villages covered by the investigation at the time of the enquiry. But not in all cases were their husbands resident in the villages. This was particularly true of the centre at Mithbaon. The out-migration of the male population from this centre to the city of Bombay has been earlier referred to. On that account, the husbands of a large number of women were not found in the village at the time of enquiry. Nevertheless, all the reported male births were taken into account and were appropriately related to their fathers whether or not they were found residing in the villages covered by the investigation. It will be seen that the paternal net reproduction rate works out to be 1.46.

TABLE No. 7.7.

Computation of the net reproduction rate and the length of generation for males.
(Combined data for the centres)

Age	Number of males	No. of births during the year of enquiry	Fertility rate per 1000 males	Pivotal age	Survival rate per person	Column 4 × 6	Column 5 × 7
13—17	1520	7	4.61	15	0.59891	2.76	41.40
18—22	1635	96	58.72	20	0.57479	33.75	675.50
23—27	1421	312	219.56	25	0.54994	120.74	3018.50
28—32	1465	385	262.80	30	0.51877	136.33	4089.90
33—37	1099	251	228.39	35	0.47751	109.06	3817.10
38—42	1093	216	197.62	40	0.42635	84.26	3370.40
43—47	747	99	132.53	45	0.37181	49.28	2217.60
48—52	758	61	80.47	50	0.31552	25.39	1269.50
53—57	460	19	41.13	55	0.25283	10.40	572.00
Above 57	972	9	9.26	60	0.18175	1.68	100.80
Total	11170	1455	1235.09	375		573.65	19172.20
Upper row × 5			6175.45			2868.25	95861.00

(From Col. 7) G.R.R. per male = $6.175450 \times (\text{sex ratio}) 0.50852 = 3.14034$.

(From Col. 7) N.R.R. per male = $2.86825 \times (\text{sex ratio}) 0.50852 = 1.45856$.

From Col. 8, let $R_1 = 95.86100$.

Let also $R_0 = 2.86825$. Then the length of generation = $\frac{R_1}{R_0} = 33.42142$.

A maternal net reproduction rate of 1.29 means that a female of the present generation will leave behind, on an average, 1.29 females in

the next generation. In the same way, a paternal net reproduction rate of 1.46 means that a male of the present generation will leave behind, on an average, 1.46 males in the next generation. The difference between these two rates means that the male population is possibly increasing at a faster rate than the female population. However, one reason for the difference between these two rates is that the length of the generation itself is not the same for the male and female populations. The length of generation may be roughly defined to be the average interval between the birth of parents and the birth of their offsprings. The computation of the length of generation for the female and male populations has been shown in Table Nos. 7.6 and 7.7. It shows that the length of generation for the female population is 26.34 years while for the male population it is 33.42 years. The net reproduction rates of 1.29 and 1.46 are therefore rates of increase for the female and male population per 26.34 and 33.42 years respectively.

The two rates may be converted to an annual basis. When so done, they turn out to be 0.0097 for the female population and 0.0114 for the male population. The difference between the two rates is not thus very large and to be judged significant would require a closer examination of the data.

CHAPTER VIII

FACTORS AFFECTING FERTILITY

Several factors are presumed to affect marital fertility. In our previous investigations we have examined a number of such factors, biological as well as socio-economic. By and large, we did not find any positive evidence to suggest that any of these factors had any effect on marital fertility. The same is true of the present investigation. In this chapter, we propose to examine a few of the more important factors and present the lack of positive evidence of their effect on marital fertility. We propose to consider the following factors: (i) Age at present marriage; (ii) Difference between the ages of husband and wife; (iii) Order of delivery or in other words number of previous children; (iv) Income; (v) Caste. Lack of positive evidence of their effect on marital fertility is presented in Table Nos. 8.1 to 8.5.

Procedure with regard to any factors is as follows. The married women are classified according to the factor under consideration, say, caste. Then taking into account the age composition of the women in each such class, the number of children that may be expected of them in a single year is derived on the basis of the age specific marital fertility rates derived in the previous chapter. Against this expected number, the actual number of children that these women reported to have been born during the year preceding the enquiry is compared. If the expected and the observed number of children to women in all classes are in close agreement, it is presumed to suggest lack of any positive evidence of the factor under consideration having any influence on marital fertility. Statistical significance of the divergence between the expected and the observed number of children has been tested by the chi-square test of significance. In respect of all the above mentioned factors the chi-square test shows that the expected and observed number of children are in all cases in reasonable agreement and any divergence between them is statistically insignificant. There is thus no positive evidence that any of these factors has any influence on marital fertility. As mentioned earlier, our previous investigations pointed more or less to the same conclusion. It seems therefore that in the populations covered by our several investigations, the marital fertility is indeed unaffected by all those factors which are presumed to affect it. In any case, the influence of these factors, if any, is very small and will need much larger investigations to be confirmed.

As has been described earlier, the village Mithbaon was affected by a special circumstance, namely, the considerable out-migration from it to the city of Bombay of men of working age. In fact, out of the total

TABLE No. 8.1.

Effect of age at present marriage on marital fertility.

Age at present marriage in years	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$
<div style="display: flex; justify-content: space-around;"> BORI DHANORE MIRAJGAON </div>												
Up to 12	830	163	158.22	0.1444	115	24	25.06	0.0448	976	170	168.99	0.0060
13—17	288	51	53.62	0.1280	915	216	210.38	0.1501	310	57	55.61	0.0347
Above 17	136	25	26.77	0.1170	369	83	87.56	0.2375	66	8	10.79	0.7214
Unspecified	3	—	0.38	—	—	—	—	—	6	1	0.61	—
Total	1257	239	239.00	0.389	1899	323	323.00	0.432	1358	236	236.00	0.762
<div style="display: flex; justify-content: space-around;"> MITHBAON MUDALGI NALWAR </div>												
Up to 12	219	32	26.30	1.2354	545	112	116.82	0.1988	1007	169	169.84	0.0042
13—17	512	89	93.44	0.2110	292	71	68.68	0.0784	554	100	99.62	0.0014
Above 17	131	29	29.82	0.0225	67	18	15.33	0.3928	77	9	9.62	0.0400
Unspecified	8	1	1.44	—	21	5	4.97	—	14	8	1.92	—
Total	870	151	151.00	1.469	925	206	206.00	0.670	1652	281	281.00	0.047

TABLE No. 8.2.

Effect of difference between the ages of husband and wife on marital fertility.

Difference between ages of husband and wife in years	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$
		BORI				DHANORE				MIRAJGAON		
0—5	377	78	69.86	0.9485					465	86	87.95	0.0432
6—10	633	120	121.92	0.0302		Data inadequate			686	117	116.12	0.0067
11 and above	240	39	45.74	0.9932		for classification.			191	31	29.66	0.0605
Unspecified	7	2	1.48	—					16	2	2.27	—
Total	1257	239	239.00	1.972					1358	236	236.00	0.110
		MITHBAON				MUDALGI				NALWAR		
0—5	221	46	40.97	0.6175	237	63	52.80	1.9705	408	69	72.48	0.1671
6—10	433	71	75.92	0.3188	487	103	108.83	0.3123	841	142	142.63	0.0028
11 and above	201	29	31.30	0.1690	200	39	44.10	0.5898	373	67	62.51	0.3225
Unspecified	15	5	2.81	—	1	1	0.27	—	30	3	3.38	—
Total	870	151	151.00	1.105	925	206	206.00	2.873	1652	281	281.00	0.492

TABLE No. 8.3.

Effect of total number of children born prior to the period of investigation on marital fertility.

Total number of children born prior to the period of investigation	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$
		BORI				DHANORE				MIRAJGAON		
0	322	45	50.38	0.5745	215	56	55.50	0.0045	304	56	51.68	0.3611
1-3	460	121	118.59	0.4834	472	158	150.19	0.4061	424	87	98.01	1.2368
4-6	312	59	60.60	0.0422	368	79	87.20	0.7711	326	62	57.72	0.3174
Above 6	157	14	13.50	0.0185	344	30	30.11	0.0004	285	30	25.34	0.8570
Unspecified	6	—	0.93	—	—	—	—	—	19	1	3.25	—
Total	1257	239	239.00	1.119	1399	323	323.00	1.182	1358	236	236.00	2.772
		MITHBAON				MUDALGI				NALWAR		
0	162	36	40.51	0.5021	260	39	46.51	1.2126	397	58	72.33	2.8391
1-3	335	79	74.52	0.2693	294	78	78.84	0.0009	630	140	135.43	0.1542
4-6	257	31	29.71	0.0560	218	60	55.90	0.8007	374	55	53.18	0.0623
Above 6	115	5	5.98	0.1606	153	29	24.75	0.7298	248	28	19.47	3.7371
Unspecified	1	—	0.28	—	—	—	—	—	3	—	0.59	—
Total	870	151	151.00	0.988	925	206	206.00	2.244	1652	281	281.00	6.793

FACTORS AFFECTING FERTILITY

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TABLE No. 8.4.
Effect of family income on marital fertility.

Family Income (Rs.)	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$
	BORI				MIRAJGAON				MUDALGI			
—500	498	110	102.48	0.5595	485	72	78.05	0.4690	347	86	83.57	0.0707
501—1000	464	76	82.48	0.5016	571	104	98.47	0.3106	442	97	94.07	0.0913
1001 and above	250	47	45.97	0.0231	332	54	56.63	0.1221	136	23	28.36	1.0130
Unspecified	45	6	8.17	—	20	6	2.85	—	—	—	—	—
Total	1257	239	239.00	1.084	1358	236	236.00	0.902	925	206	206.00	1.175
	NALWAR				DHANORE				MITHBAON			
—500	728	138	126.18	1.1072	503	132	126.49	0.2400	592	107	101.10	0.3443
501—1000	620	94	102.84	0.7599	533	124	118.05	0.2999	184	31	33.37	0.1683
1001 and above	299	49	51.33	0.1058	336	61	72.64	1.8652	90	13	15.10	0.2921
Unspecified	5	—	0.65	—	27	6	5.82	—	6	—	1.43	—
Total	1652	281	281.00	1.973	1399	323	323.00	2.405	870	151	151.00	0.805

TABLE No. 8.5.
Effect of caste on marital fertility.

Caste	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$	Number of women	Observed number of births	Expected number of births	$\frac{(O-E)^2}{E}$
	BORI				MIRAJGAON				DHANORE			
Brahmins	38	5	6.56	0.8710	33	4	5.59	0.4523	—	—	—	—
Backward and Scheduled castes	295	52	55.21	0.1866	353	61	59.07	0.0631	1305	308	302.56	0.0978
Other Hindus	774	155	149.44	0.2069	894	153	156.96	0.0999	78	12	16.69	1.3179
Other than Hindus	150	27	27.79	0.0225	78	18	14.37	0.9170	16	3	8.75	0.1500
Total	1257	239	239.00	0.787	1358	236	236.00	1.532	1399	323	323.00	1.566
	MITHBAON				MUDALGI				NALWAR			
Brahmins	26	4	3.31	0.1438	19	6	4.13	0.8467	12	3	2.16	0.3267
Backward and Scheduled castes	43	4	8.49	2.3746	89	28	21.85	1.7310	596	98	101.20	0.1012
Other Hindus	801	143	139.20	0.1037	208	46	45.05	0.0200	431	73	72.68	0.0014
Lingayats	—	—	—	—	518	106	113.09	0.4445	250	38	42.32	0.4410
Other than Hindus	—	—	—	—	91	20	21.87	0.1599	363	69	62.64	0.6457
Total	870	151	151.00	2.622	915	206	206.00	3.202	1652	281	281.00	1.516

number of married women at Mithbaon, 338 had their husbands away in Bombay for a large part of the year. It would be worth examining whether this had any effect on their fertility. This is done in Table No. 8.6. The procedure is similar to that explained above. The 338

TABLE No. 8.6.

Effect of out-migration on marital fertility in Mithbaon.

Age	Number of married women with out-migrated husband	Number of births to be expected in a year	Number of births reported in a year
13—17	10	2	2
18—22	74	15	28
23—27	80	19	23
28—32	55	14	9
33—37	47	6	6
38—42	29	2	2
43—47	19	1	1
48 and above	24	—	—
Total	338	59	71

women in question are classified by age. Then on the basis of the fertility of the remaining married women in the corresponding age groups, the number of children that might be expected of them in a single year is derived. These are compared with the actual number of births reported by these women. It will be seen that the performance of these 338 women was not lower than that of the other women. In the age groups above 23, it was more or less on par while in the younger age group of 18-22, it seems that it might be even above that of the other women. It is clear therefore that the out-migration of their husbands for a large part of the year did not adversely affect the fertility of these women. If anything, in the younger age groups, it enhanced their fertility.

CHAPTER IX

FERTILITY : PAST AND PRESENT

The discussion in the previous chapters was based on the fertility performance of the women in a single year, namely, the year immediately preceding our investigation. The fertility rates and indexes presented thus indicate the present levels of fertility. It is possible that there has been some rise or decline in the levels of fertility in the recent past. We have only certain indirect data to examine this possibility. We propose to present it in this chapter.

We know the total number of children born to the women included in our investigation. These women were of various ages at the time of our enquiry and they had reported the total number of children born to them upto those ages. We may compare these against what we might expect on the supposition that there have in fact been no changes in the fertility levels in the recent past and that the women were subjected, ever since they were married, to more or less the same fertility rates as indicated by their performance in the year preceding the enquiry. If the reported total number of children appears to be in excess of what might be expected on the above supposition, it might be regarded as evidence that the women were subjected to somewhat higher fertility rates than the present ones; or, in other words, that the fertility rates had declined in the recent past. The opposite would be the case if the reported total number of children appeared smaller than the expected.

In a previous chapter we have worked out the present fertility rates for married women of given age. Making use of these it is possible to calculate the number of children that a married woman of given age, who was married at a given age, would expect during her married life to-date. However the computation becomes a little too complicated on account of the varying ages at which the women were married. A simpler procedure is to work out the fertility rates for married women not by present age but by duration of marriage. The number of children that a married woman of a given marriage duration would expect may then be obtained by simply cumulating such duration specific fertility rates upto the given duration.

In Table No. 9.1, we give the duration specific fertility rates for married women based on their performance during the year preceding the enquiry. It will be remembered that a number of these women were married much before the age 13. It would be meaningless, for the present purpose, to count in such cases their marriage duration from the child age.

Therefore in all such cases we have regarded their marriage duration as commencing from the age 13.

TABLE No. 9.1.

Marital fertility rates by duration of marriage (per 1000 females).

Duration of marriage	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
0	—	52.6	—	—	—	—
1	—	260.0	54.0	142.9	—	78.5
2	64.6	309.5	71.4	238.1	135.1	220.8
3	71.4	400.0	269.5	483.9	83.3	262.5
4	264.7	277.8	214.3	296.3	424.2	185.2
5	86.2	380.9	233.9	304.3	218.2	338.5
6	181.8	384.6	216.2	384.6	130.4	384.6
7	278.3	305.1	272.7	227.3	320.8	195.4
8	333.3	333.3	137.9	250.0	250.0	218.0
9	271.4	371.9	301.6	241.4	368.4	261.9
10	307.7	386.0	297.3	230.8	419.3	404.8
11	481.5	240.0	259.3	247.8	315.8	169.5
12	250.0	316.7	276.6	214.3	236.4	159.4
13	281.3	260.0	296.3	280.0	200.0	196.1
14	272.7	285.7	282.1	111.1	277.8	244.4
15	311.7	333.3	218.8	200.0	323.5	189.2
16	294.1	360.0	260.9	142.9	125.0	111.1
17	212.1	250.0	173.9	176.5	323.5	186.4
18	181.8	354.8	227.3	312.5	300.0	181.6
19	387.1	120.0	242.4	227.3	400.0	61.2
20	62.5	243.9	208.3	117.7	100.0	117.7
21	411.8	133.3	150.0	71.4	312.5	142.9
22	70.4	48.8	142.9	137.9	354.8	139.5
23	142.9	100.0	142.9	83.3	227.3	200.0
24	266.7	—	35.7	62.5	285.7	—
25	95.2	114.3	45.5	74.1	100.0	66.7
26	111.1	74.1	—	100.0	181.8	—
27	123.1	20.4	104.1	76.9	125.0	57.7
28	48.5	12.5	8.6	15.4	8.0	—

When the duration specific fertility rates are cumulated, we get the number of children that a woman with a given marriage duration would expect if she were subjected to the present duration specific rates during her marriage duration. These may be compared with the total number of children actually reported by such women. The comparison is done in Table No. 9.2. It is also shown graphically in the following graphs.

TABLE No. 9.2.

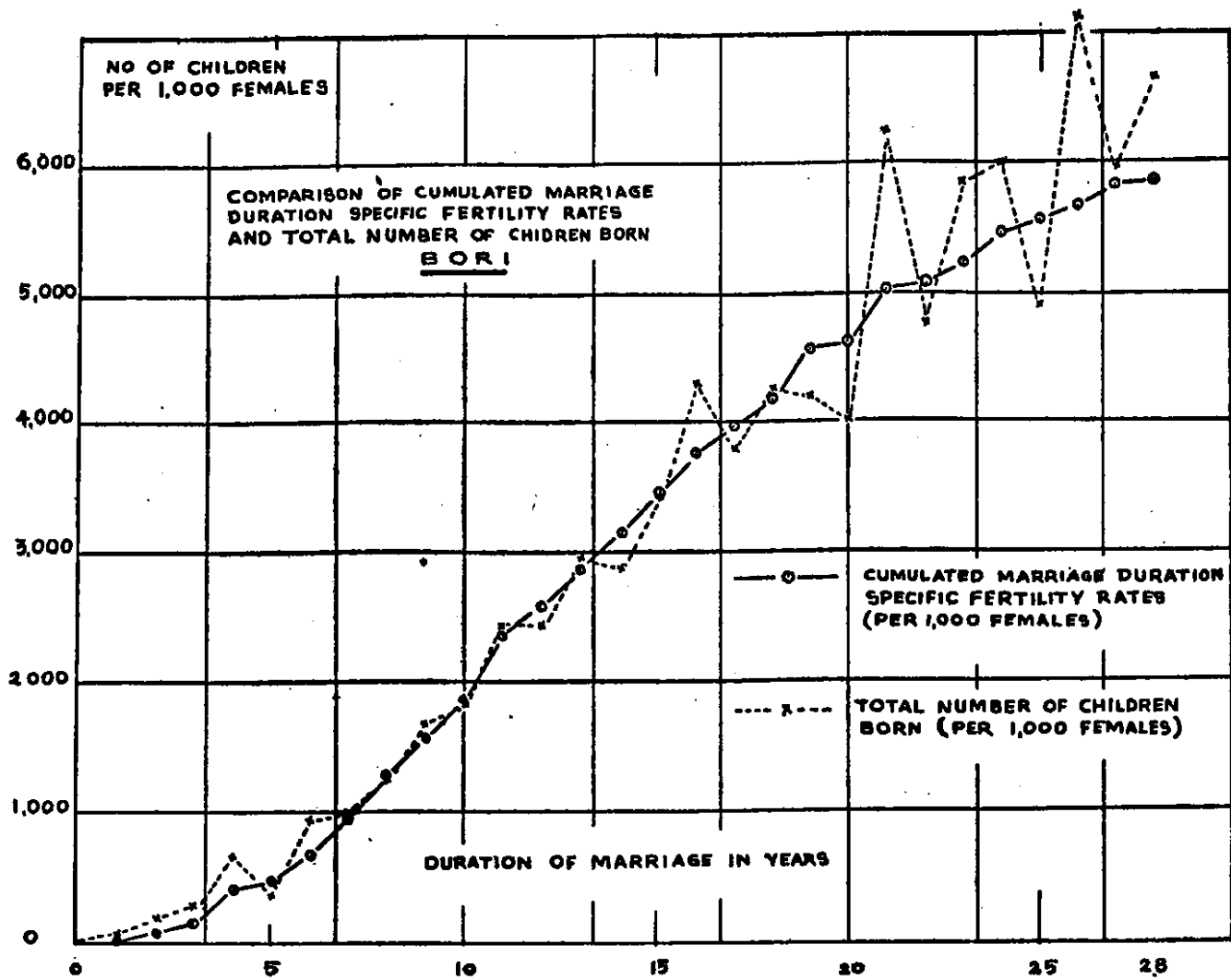
Comparison of (1) cumulated marriage duration specific fertility rates (per 1000 females) and (2) total number of children born (per 1000 females).

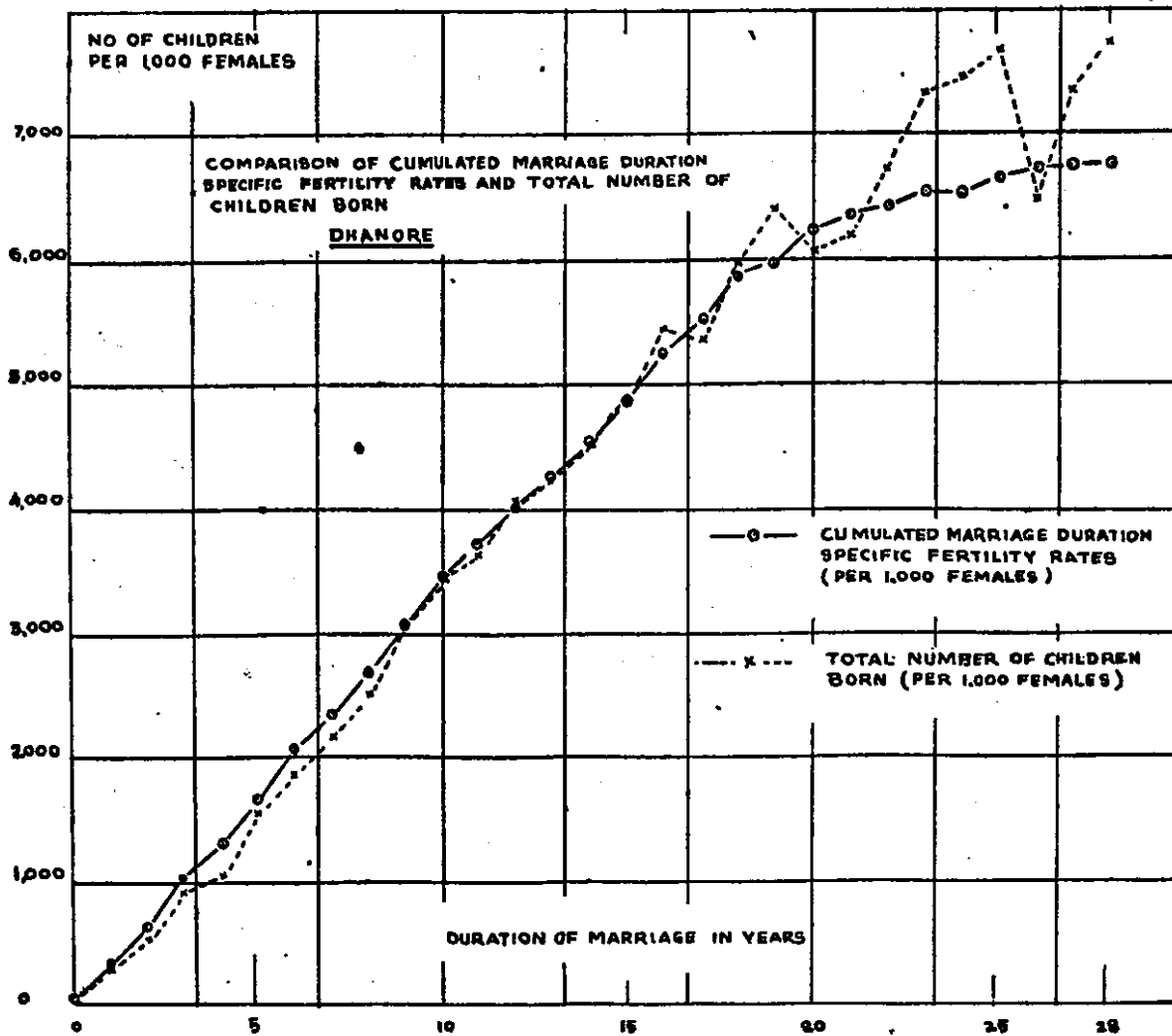
Duration of marriage in years	BORI		DHANORE		MIRAJGAON	
	(1)	(2)	(1)	(2)	(1)	(2)
0	—	—	52.6	52.6	—	—
1	—	44.4	312.6	300.0	54.1	54.1
2	64.5	193.6	622.2	523.8	125.5	119.1
3	136.0	285.7	1022.2	900.0	395.3	444.4
4	400.7	647.1	1299.9	1055.6	609.6	642.9
5	486.9	362.1	1680.9	1587.3	842.9	750.0
6	668.7	909.1	2065.5	1861.5	1059.2	1243.2
7	947.0	969.1	2370.6	2186.4	1331.9	1596.0
8	1280.4	1277.8	2703.9	2515.2	1469.8	1862.1
9	1551.8	1685.7	3076.8	3067.8	1771.4	2254.0
10	1859.5	1846.2	3462.8	3456.1	2068.7	2864.9
11	2341.0	2407.4	3702.8	3620.0	2328.0	2851.9
12	2591.0	2409.1	4019.4	4083.3	2604.6	3329.8
13	2872.2	2937.5	4279.4	4260.0	2900.9	4555.6
14	3145.0	2863.6	4565.1	4547.6	3182.9	4128.2
15	3456.6	3415.6	4898.5	4897.4	3401.7	4906.3
16	3750.8	4294.1	5258.5	5440.0	3662.5	4521.7
17	3962.9	3798.0	5508.5	5375.0	3836.5	4847.8
18	4144.7	4222.2	5863.3	5967.7	4063.7	5954.6
19	4531.8	4193.6	5983.3	6400.0	4306.1	6000.0
20	4594.3	4000.0	6227.2	6073.1	4514.5	7333.3
21	5006.1	6235.3	6360.5	6200.0	4664.5	7100.0
22	5076.5	4746.5	6409.3	6707.3	4807.3	6381.0
23	5219.3	5857.1	6509.3	7333.3	4950.2	6357.1
24	5486.0	6000.0	6509.3	7444.4	4985.9	6464.3
25	5581.3	4904.8	6623.6	7657.1	5031.4	6681.8
26	5692.4	7222.2	6697.7	6481.5	5031.4	5333.3
27	5815.4	5984.6	6718.1	7346.9	5135.5	6583.3
28	5864.0	6674.8	6730.6	7808.3	5144.1	7223.2

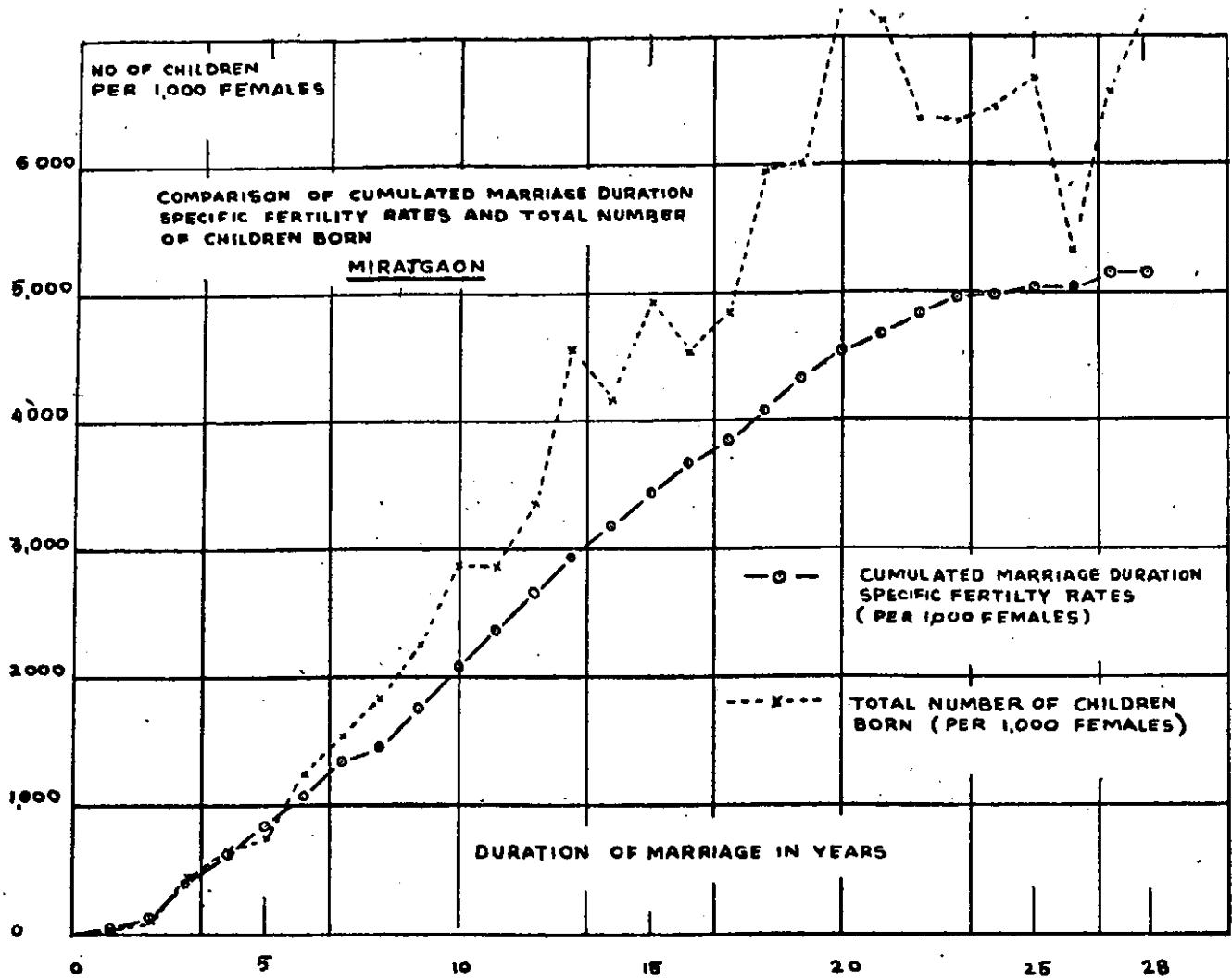
TABLE No. 9.2.—(Contd.)

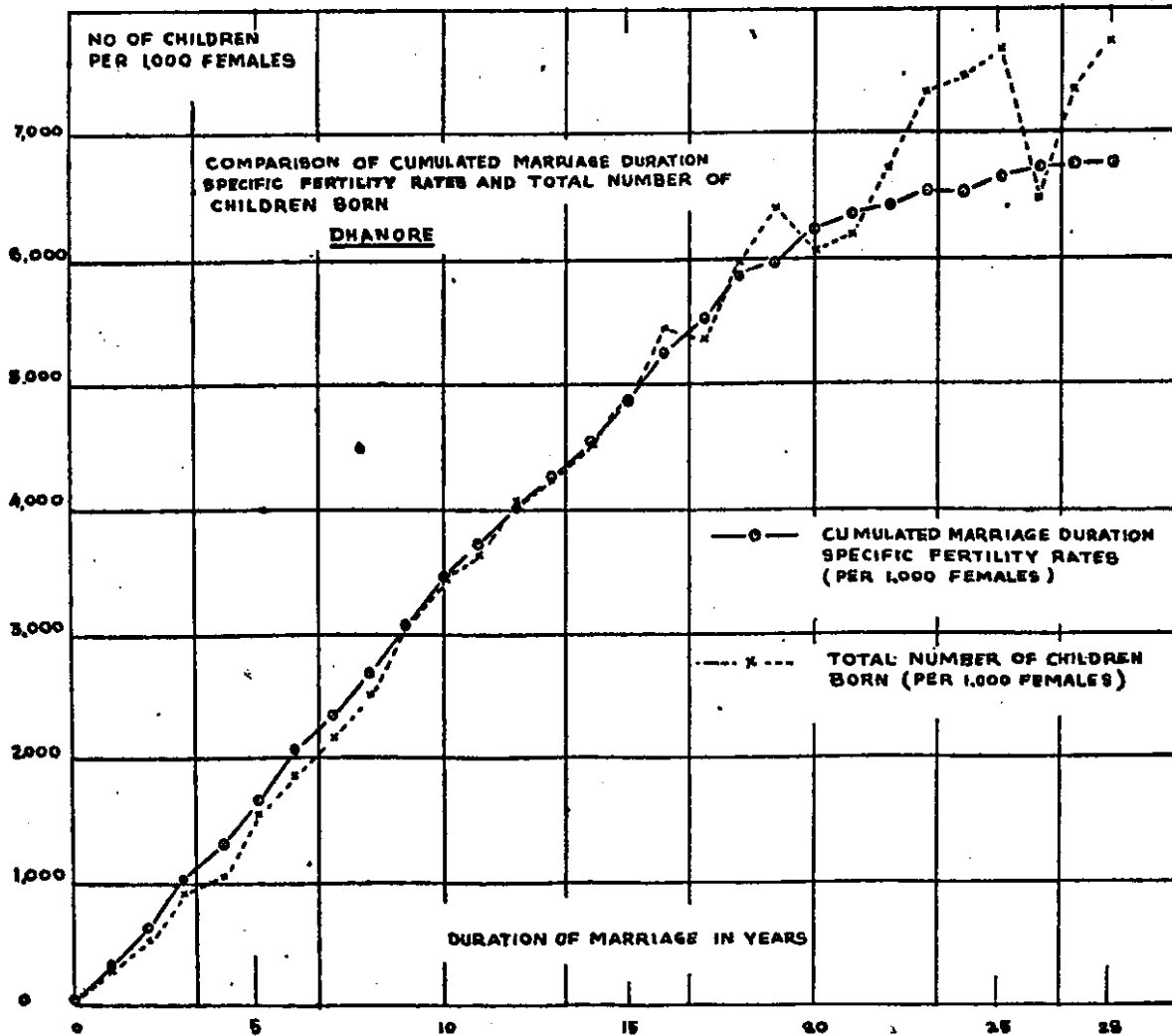
Comparison of (1) cumulated marriage duration specific fertility rates (per 1000 females) and (2) total number of children born (per 1000 females).

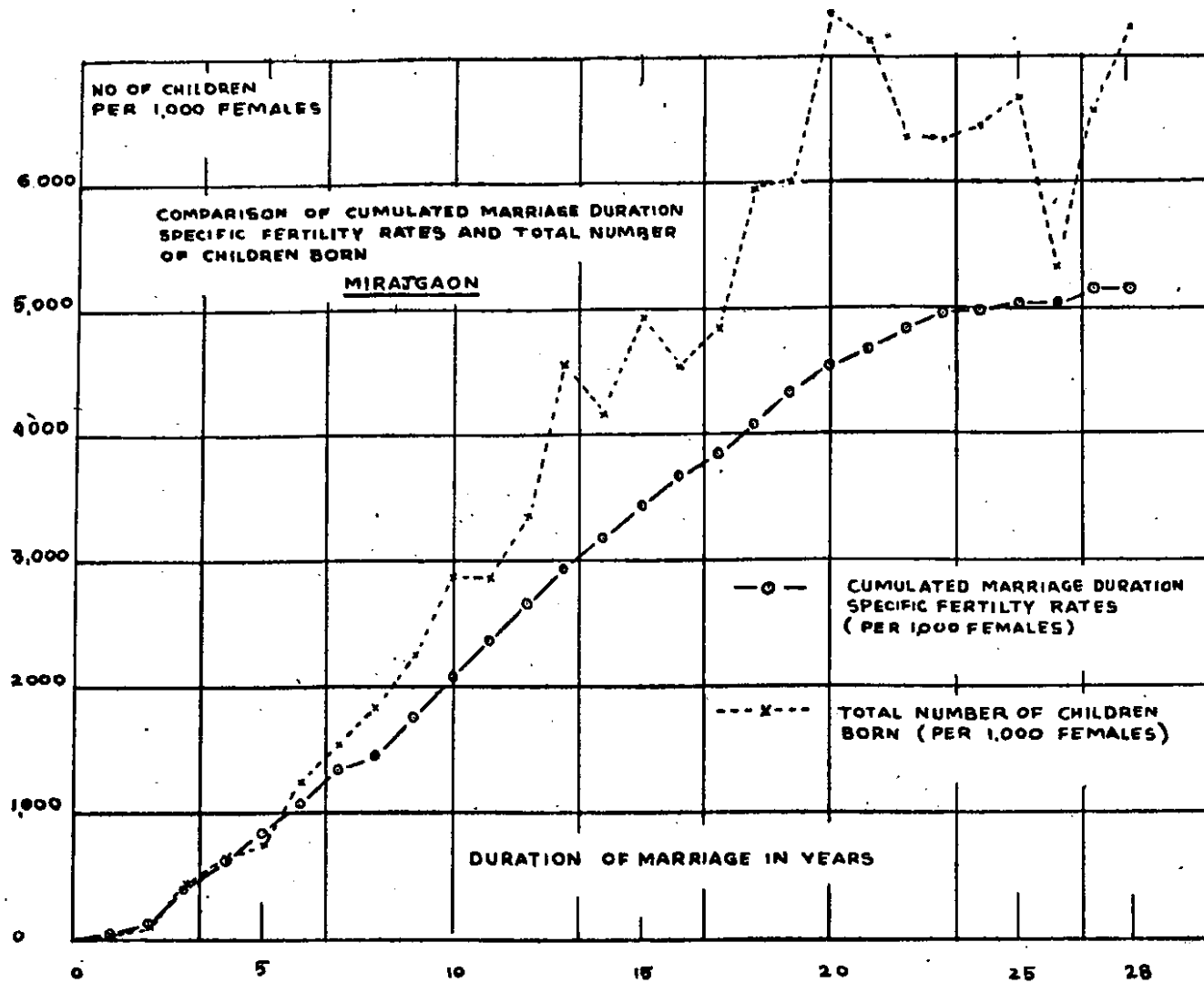
Duration of marriage in years	MITHBAON		MUDALGI		NALWAR	
	(1)	(2)	(1)	(2)	(1)	(2)
0	—	—	—	—	—	—
1	142.9	238.1	—	97.6	73.5	102.0
2	381.0	476.2	135.0	162.2	294.3	324.7
3	864.8	1000.0	218.5	222.2	556.8	687.5
4	1161.1	925.9	642.7	727.3	742.0	901.2
5	1465.5	826.1	860.9	836.4	1080.5	1292.3
6	1850.1	1615.4	991.3	956.5	1465.1	1569.2
7	2077.4	1522.7	1312.1	1188.7	1660.5	1678.2
8	2327.4	2041.7	1562.1	1750.0	1878.4	1807.7
9	2568.8	2310.3	1930.5	2105.3	2140.3	2500.0
10	2799.5	2153.9	2349.8	2096.8	2545.1	3166.7
11	3147.4	2347.8	2665.6	2394.7	2714.6	3288.1
12	3361.6	3071.4	2902.0	2872.7	2874.0	3260.9
13	3641.6	3120.0	3102.0	3133.3	3070.1	3451.0
14	3752.8	2944.4	3379.8	3888.9	3314.5	3822.2
15	3952.8	2766.7	3703.3	3676.5	3503.7	3351.4
16	4095.6	4142.9	3828.3	3875.0	3614.8	4407.4
17	4272.1	3882.4	4151.8	4044.1	3801.3	4576.3
18	4584.6	4562.5	4451.8	7500.0	3932.8	4710.5
19	4811.9	4727.3	4851.8	4966.7	3994.1	5306.1
20	4929.5	4294.1	4951.8	4900.0	4111.7	6411.8
21	5000.9	4357.1	5264.3	6125.0	4254.6	5514.3
22	5138.9	4620.7	5619.2	6000.0	4394.1	6162.8
23	5222.2	4000.0	5846.4	5409.1	4594.1	6400.0
24	5284.7	5250.0	6132.2	6857.1	4594.1	5066.7
25	5358.8	5370.4	6232.2	4700.0	4660.8	5377.8
26	5458.8	7100.0	6414.0	8272.7	4660.8	6454.6
27	5535.7	5615.4	6539.0	6850.0	4718.5	6519.2
28	5551.1	5838.5	6542.0	7040.0	4718.5	6056.7







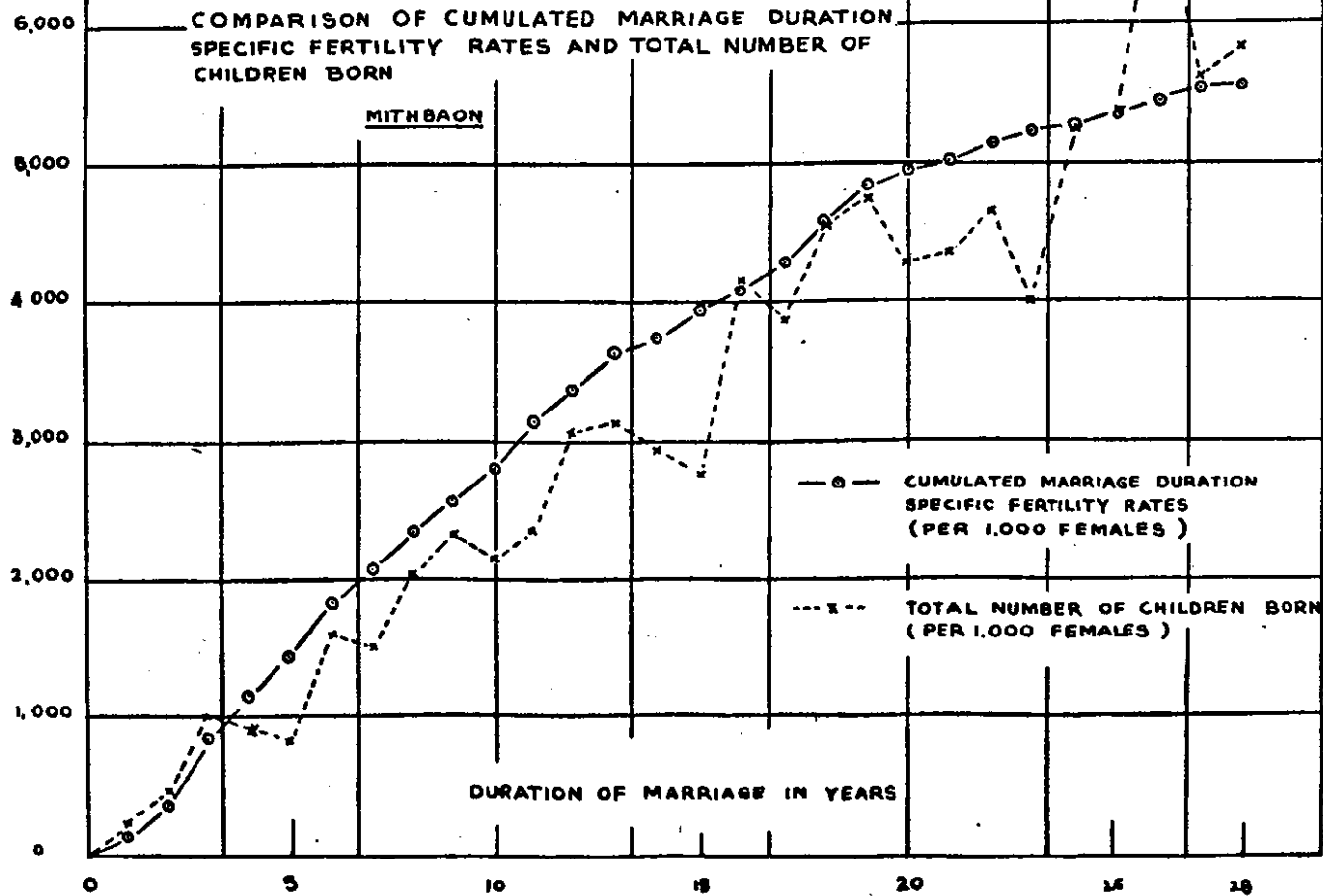


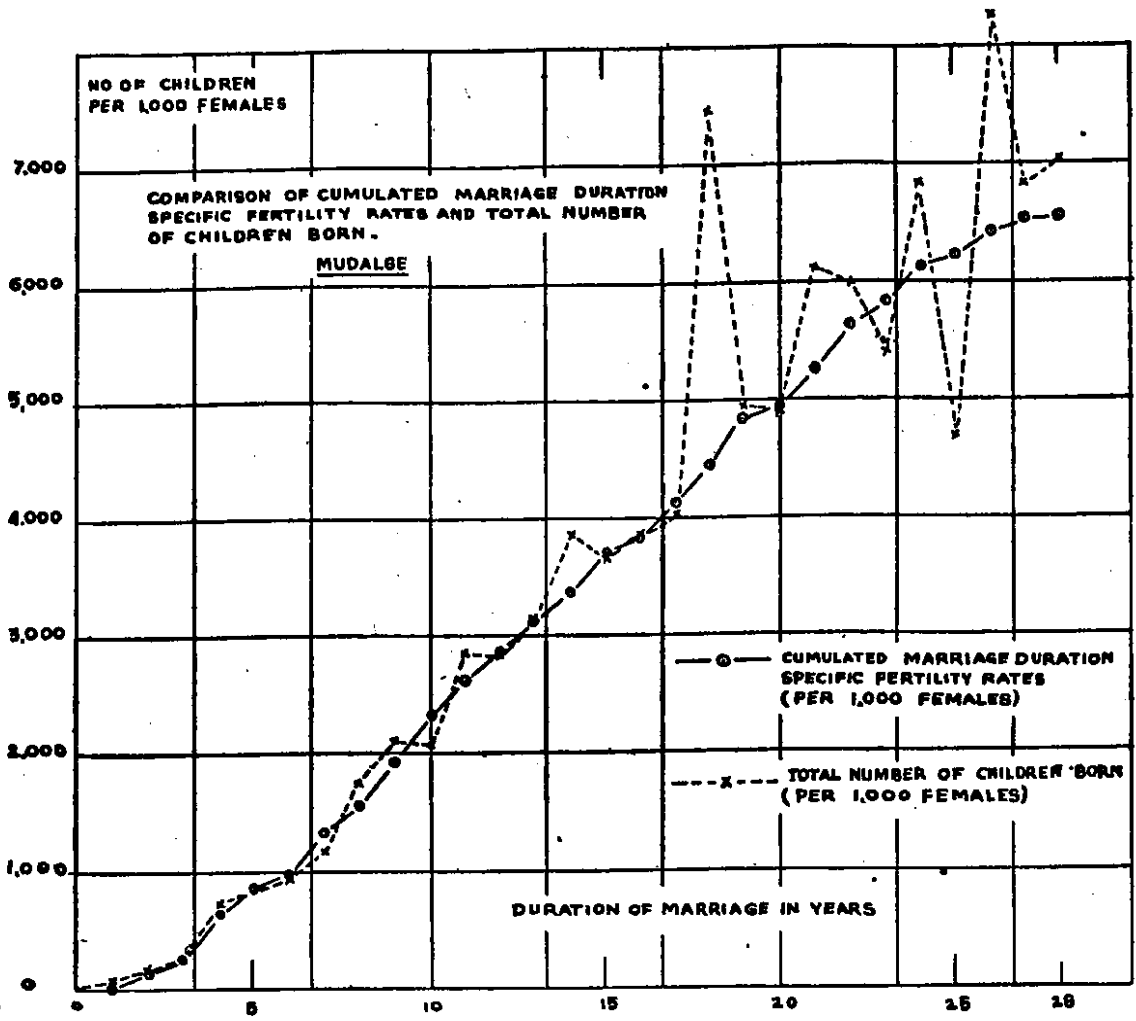


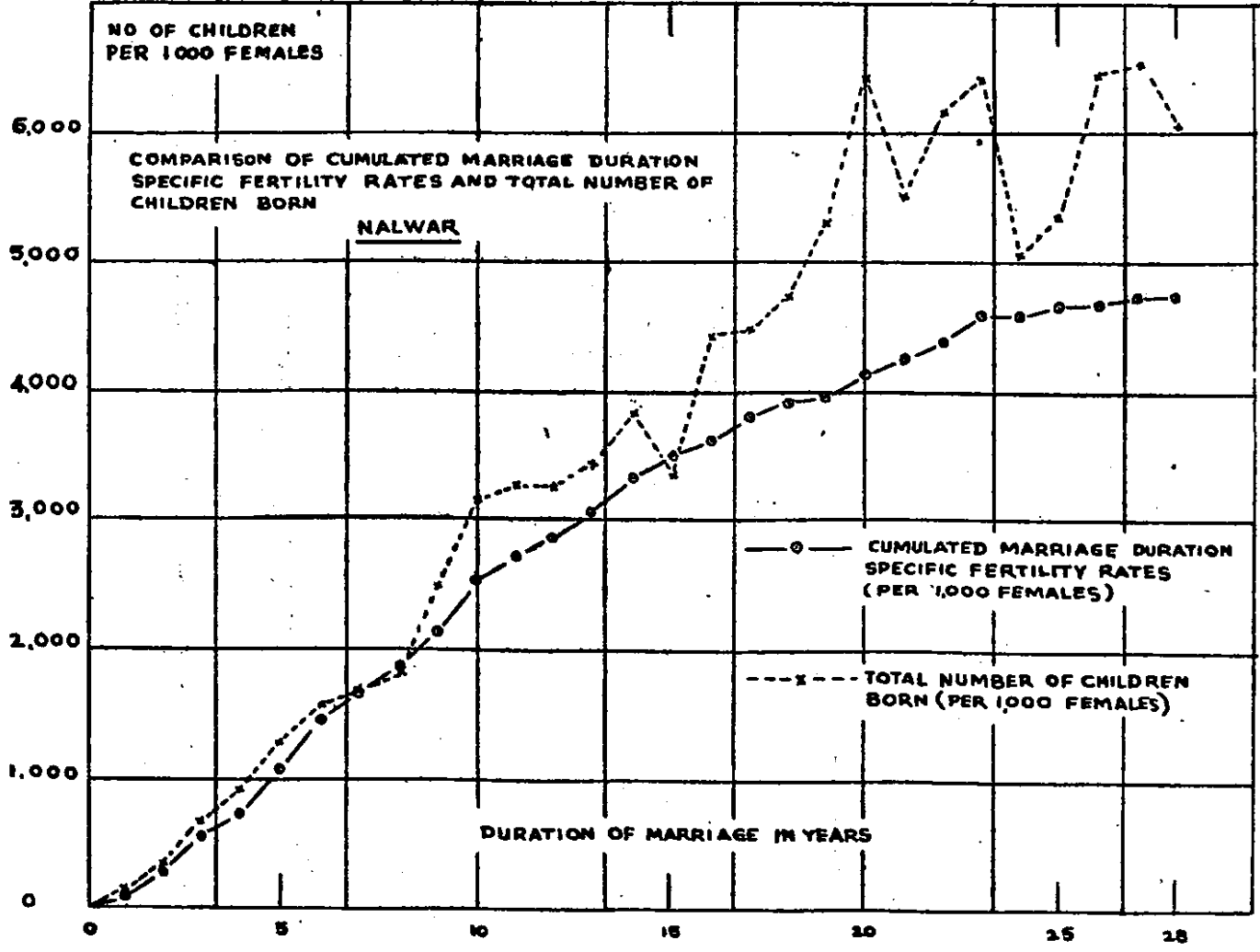
NO OF CHILDREN
PER 1,000 FEMALES

COMPARISON OF CUMULATED MARRIAGE DURATION
SPECIFIC FERTILITY RATES AND TOTAL NUMBER OF
CHILDREN BORN

MITHBAON







It will appear from these graphs that in the case of three out of the six centres, the actual numbers of children born to women of various marriage durations agree very closely with those they would expect on the basis of the duration specific fertility rates derived from their performance in the year preceding the enquiry. Here therefore there is no evidence of any changes in the levels of fertility in recent years. On the other hand, in the case of Mirajgaon and Nalwar, there is evidence of a certain decline in fertility levels in recent years. In both the cases, the number of children to be expected on the basis of the present rates is smaller than those actually reported by the women. The divergence between the two is greater in the case of Mirajgaon than that of Nalwar. Nevertheless, in both the cases, the evidence appears to be sufficiently clear and not such as might be explained as due to reporting errors. In fact, the reporting errors, if they were present, would cause the actual number of children born to be under-reported on account of the possibility of omitting some of the dead children. This would tend to keep the actual number of children born as reported to be below the number to be expected. Apparently this is what happened at Mithbaon. Here the actual number of children born, as reported, is generally smaller than the number to be expected suggesting the possibility that at this centre, the fertility had risen in recent years. However, on closer examination of the reported number of children, it seems that at Mithbaon they were under-reported on account of the under-reporting of the dead children. In Table No. 9.3, we give for the several centres, the proportion of dead children among all children born as reported by mothers of various ages. It will be seen that the mortality among children of mothers of all ages is very much lower at Mithbaon as compared with that at all the other centres. There was little in the public health conditions at Mithbaon to justify this considerably lower rate of

TABLE No. 9.3.

Number of dead children as per cent of all children born to mothers of various ages.

Age group	Bori	Dhanore	Mirjgaon	Mithbaon	Mudalgi	Nalwar
18—22	27.1	17.6	26.0	10.8	27.8	26.0
23—27	29.6	22.9	22.3	13.6	29.3	29.4
28—32	35.3	27.4	28.5	14.0	28.2	34.6
33—37	37.8	25.3	26.3	16.7	34.7	36.6
38—42	36.8	29.0	31.5	16.8	37.8	37.7
43—47	33.0	32.0	33.8	18.6	34.1	39.1
48—52	43.3	31.7	32.3	19.4	44.8	40.1
53 & over	43.6	31.0	42.8	28.3	43.1	46.5
Total	36.3	27.9	29.6	18.2	34.0	34.5

mortality. We are therefore inclined to conclude that at this centre, the total number of children born was somewhat under-reported and could not be much below those to be expected on the basis of the present levels of fertility. The apparent evidence of a rise in fertility in recent years at this centre does not therefore seem to be real.

In conclusion, we may say that the levels of fertility seem to have remained more or less unchanged in recent years. There is however some evidence at some of the centres of a certain decline in them in recent years. This is important because we have similar evidence from some of our earlier investigations.

CHAPTER X

ATTITUDES TOWARDS FAMILY PLANNING

One of the principal objectives of the present enquiry was to assess the attitudes of the population towards family planning and limitation. This part of the enquiry was undertaken only after the investigators had stayed in the village for over six months. As mentioned earlier, the investigators were all trained nurses and health visitors and had received a two weeks' training in the family planning clinics of the Poona Corporation. We had deliberately permitted them to practise midwifery in the villages covered by the investigation and also treat minor diseases, for which they were furnished with the necessary medical supplies. This proved extremely useful in gaining the private confidence of the people and later also in providing suitable opportunities for opening the discussion on family planning.

The questionnaire used for this part of the enquiry has been reproduced along with the other questionnaires in the appendix to Chapter I. However, in this case, the questionnaire was meant more for the guidance of the investigators rather than as specific vehicle for conducting the interview. The investigators did not therefore fill in these questionnaires in a formal way. Nor was the interview for the purpose done in a single formal sitting. The investigators met the respondents, married women of a certain category, off and on and made case notes only where they were satisfied that the response was genuine. Where the woman in question appeared interested in family planning or limitation, all the standard methods of contraception, beginning with the rhythm method and ending with the surgical methods, were explained to her one by one and as far as she showed interest. If a woman was not interested, she could tell the investigator so and no further knowledge was pressed on her. As a result the final returns on the attitudes to family planning are not in the form of a set of formally completed questionnaires but in the form of case notes made by the investigators bringing out all the variety of individual responses.

It was proposed that this part of the enquiry may be done in respect of all married women of ages between 25 and 40 and who had experienced at least one pregnancy during the five years preceding the enquiry. However, for want of time, only about half of such women could be contacted for the purpose. The coverage was not uniform in all centres. It was more or less complete at Mithbaon. On the other hand, the entire enquiry had to be given up at Mudalgi. In Table No. 10.1, we give for the remaining five centres, the number of women who came

within the above definition and hence should have been contacted and the number of case notes actually made.

TABLE No. 10.1.

Number of women selected for family planning enquiry and the number actually visited.

Village	Number of women selected for F.P. enquiry	Number of women interviewed
Bori	204	68
Dhanore	236	98
Mirajgaon	241	157
Mithbaon	289	226
Nalwar	337	98
Total	1307	647

A set of questions related to the pregnancy and delivery last experienced by the women in order to judge the extent to which they involved physical and economic hardship. Of the women interviewed, 74 per cent reported no trouble during pregnancy. The remaining reported certain complaints but only 5 per cent had received specific medical treatment for the purpose. In 81 per cent of the cases, the deliveries were normal. In another 8 per cent there was trouble only during delivery. In the remaining 11 per cent cases, the women reported the deliveries to be real hardship, both during and after. About 5 per cent said that physically they should no more bear any children.

In 86 per cent of the cases, the deliveries were done at home. In another 11 per cent cases, they were done at the homes of the mothers of the women. In only 3 per cent cases they were done in hospitals. These cases were from Mirajgaon and Mithbaon. In Table No. 10.2 is given a classification of the cases according to the main helping hand during delivery and confinement.

In Table No. 10.3, the cases have been classified according to the expenses of the delivery.

On the whole, the women looked upon the delivery as a normal matter and certainly as no great hardship. Few complained of lack of helping hands or of the expenses involved.

Let us now turn to the attitudes of these women to family planning and limitation. To begin with we shall make no distinction between family planning and family limitation and hence shall use the more general term of contraception. Among the 647 women interviewed by our in-

TABLE No. 10.2.

Women classified according to the main helping hand during their last delivery and confinement.

Helping hand	Per cent of women
Mother-in-law	28.1
Other in-laws	14.1
Daughter	14.3
Mother	24.7
Sister	4.1
Other relations from mother	4.8
Male members including husbands	5.1
Others	4.9
Total	647

In about 7 per cent cases, the main helping hands were children of below 14 years.

TABLE No. 10.3.

Women classified according to the expenses of their last delivery.

Expenses in Rs.	Per cent of women
Upto Rs. 5	26.6
Rs. 6—15	14.8
Rs. 16—25	19.5
Rs. 26—50	25.9
Above Rs. 50	13.2
Total	647

investigators, about 40 per cent responded favourably to the idea of contraception while an equal number showed themselves opposed to contraception. Among the remaining, about 15 per cent refused to discuss the subject and their attitude may be taken to be generally hostile though it is possible that some of them refused to discuss because they thought the subject was too dangerous even to discuss. About 3 per cent did not appear opposed but at the same time did not show any interest on the grounds that in their case, there was no need for contraception. The remaining, about 2 per cent, appeared incapable of giving any intelligent responses. Broadly speaking, this sums up the attitude of the population towards this subject.

Let us examine whether the two groups of women, one favourable and the other unfavourable to contraception, differed in respect of their

social, personal and family circumstances such as their present age, the number of children born to them, the number of living sons they had, and the caste and the educational status of their husbands. The relevant data are shown in Table Nos. 10.4 to 10.8. In these Tables, the women are classified by the above mentioned factors and it is shown what proportions of women in each class were favourable and unfavourable to contraception. It will be seen that larger proportions of women in the older age groups, with larger number of children born to them, and with larger number of living sons were favourable to contraception. This is as it should be. Mortality among children also appeared to influence their attitude towards contraception. For instance the proportion of children living to total born was 79.8 in the group of women who were favourable while it was only 74.3 per cent in the group of women who were unfavourable to contraception. This was true even if the women were compared in each group. In all the age groups of the women, the proportion of surviving children was higher among the women who were favourable than among those who were unfavourable to contraception. Thus in all these respects the conditioning of their attitudes towards contraception appears normal.

TABLE No. 10.4.

Attitude towards contraception of women of different ages.

Attitude towards contraception	Age group				All
	—27	28—32	33—37	Above 37	
	Per cent of women				
Favourable	36.8	38.0	43.7	44.1	39.1
Unfavourable	45.6	39.6	34.4	36.8	39.1
Others	17.7	22.4	21.9	19.1	21.8
Total number	173	251	154	69	647

TABLE No. 10.5.

Attitude towards contraception according to the total number of children born.

Attitude towards contraception	Number of children born.			All	
	—2	3—5	6—8		Above 8
	Per cent of women				
Favourable	18.8	36.4	49.1	47.5	39.1
Unfavourable	60.0	43.3	31.7	25.4	39.1
Others	21.2	20.3	19.2	27.1	21.8
Total number	82	280	225	60	647

TABLE No. 10.6.

Attitude towards contraception according to number of sons living.

Attitude towards contraception	Number of sons living.					All
	0	1	2	3—5	Above 5	
	Per cent of women					
Favourable	19.2	35.7	37.3	53.1	54.5	39.1
Unfavourable	53.9	44.4	44.1	26.1	27.3	39.1
Others	26.9	19.9	18.6	20.8	18.2	21.8
Total number	79	199	163	195	11	647

TABLE No. 10.7.

Attitude towards contraception of women belonging to different caste groups.

Attitude towards contraception	Brahmins	Educational Status of the Husband.			All
		Advanced and inter- mediate Hindus	Scheduled and backward castes	Other castes	
	Per cent of women				
Favourable	62.5	36.5	41.8	48.7	39.1
Unfavourable	20.8	43.5	33.9	37.8	39.1
Others	16.7	20.0	24.3	13.5	21.8
Total number	24	406	179	38	647

TABLE No. 10.8.

Attitude towards contraception according to the educational status of the husband.

Attitude towards contraception	Educational Status of the Husband.				All
	Never entered school	upto 5th standard	6th and 7th std.	Above 7th standard	
	Per cent of women				
Favourable	40.7	41.7	33.0	39.3	39.1
Unfavourable	37.8	43.3	40.2	36.9	39.1
Others	21.5	15.0	26.8	23.8	21.8
Total number	273	188	99	87	647

The caste also seemed to make a difference. Thus, 62.5 per cent of the small group of Brahmin women were favourable to contraception. On the other hand, only 36.5 per cent of the major group of women be-

longing to other advanced and intermediate castes were favourable to contraception. It is noteworthy that somewhat larger proportions of women belonging to scheduled and backward classes as also those other than Hindus were found to be favourable to contraception.

The educational status of the husbands does not seem to affect the attitudes of their wives towards such subjects as contraception. It is possible that it is only at considerably higher levels of education that any such effect may become apparent.

What we have described as favourable response to the idea of contraception varied over a wide range from willingness to practise contraception immediately by suitable means to deferring of its actual practice to some future date. In Table No. 10.9, we give a classification of the women with favourable response according to the precise nature of their attitude and interest.

TABLE No. 10.9.

Classification of women favourable to contraception according to the precise nature of their attitude and interest.

Attitude and interest	Per cent of women
Willing to adopt contraception immediately for family limitation	45.1
Willing to practise contraception for family planning	3.2
Apprehensive of husband's attitude	20.9
Unable to comprehend actual practice	13.4
Actual practice not needed in their cases	6.2
Would defer practice for some time	10.7
Total number	253

Thus 45 per cent of the women with favourable response were willing to adopt contraception immediately. It should be noted that all of them meant it for final limitation of the family to its present size. Among these we had one important category of women whose husbands were willing to co-operate in contraception. In fact, the co-operation from the husband was very often an important consideration in taking a practical step towards contraception, and as soon as he was favourable there seemed little difficulty in its practice. Majority of such cases were from Mirajgaon and Nalwar and they preferred, vasectomy or salphingectomy. For instance,

Mrs. of Mirajgaon aged 32 had 9 living children 4 of whom were sons. She was pregnant at the time of inter-

view. She and her husband wanted to put a stop to child-bearing and salphingectomy seemed to them the best solution.

Mrs. from Mirajgaon was 35 years old. She had 4 children. Among these 3 were sons. Mr., the husband, had fallen from a tree and had broken his leg. The worried couple responded well and were glad to get information regarding contraception from the investigator. The couple wanted to try a pessary and orthogynol jelly for the time being. Later the husband was going to get operated.

Mrs. from Mirajgaon had 3 sons living and no daughter. She was 30 years old. Only a week before our investigator visited the household, Mrs. had lost her daughter. When Mrs. and her husband were away on their farm for work their daughter—aged 2 years—who was left at home wandered away from the house and got stuck in mud. She got drowned in the mud and died. Our investigator was surprised to see the couple prepared for vasectomy. Their argument for being in favour of vasectomy was that it was of no use for the poor to get children as they could not look after them well, and they died like the girl they recently lost.

Mrs. from Bori, aged 28 had 5 living children. She and her husband were prepared for vasectomy because it was a one-shot remedy and was done free of charge.

Among the 45 per cent mentioned above we had another category of women. These were favourable to contraception but their husbands were not likely to co-operate with them. The women had grown so desperate that they were not bothered about the husband and were prepared to practise any method, they alone could practise. For instance,

Mrs. from Bori, aged 40 had 6 living children. She wanted no more pregnancies. She volunteered for salphingectomy. This however she did not prefer the best but there was no other way out. Her husband was not prepared to co-operate. So without bothering much about her husband, she planned to take to salphingectomy.

Mrs. from Nalwar, was 32 years old and had 4 living children out of 8 born. She belonged to backward class. She was going to adopt the rhythm method without considering her husband's opinion in the matter. She did not want to take him into account as she doubted his faithfulness to her.

Mrs. from Mithbaon aged 40 had 8 children. Seven of these were living. Mrs. was pregnant for the 9th time. She cried before the investigator and complained that all these horrible years of her life Government never helped women like her to control conception. She was so weak now that she was not going to

bother about her husband. She was desperate and would do anything to stop child-bearing. But nothing could be done at present because she was pregnant. She could get salphingectomy done on her after her delivery but there were no facilities for salphingectomy in Mithbaon or nearby.

Mrs. a Bhil woman from Dhanore had 4 children. She was 30 years old. She was prepared to consider the practice of various contraceptives without giving much thought to her husband's attitude. She had tried some herbs that did not work. She really preferred oral treatment and most of the available contraceptives seemed too complicated for her. Sterilization did not seem practicable to her.

Mrs. from Dhanore was a Bhil woman aged 32. She had 5 children. She wanted some drug to be sterile. In such matters as these she was free to use her own judgment and her husband was not likely to come in her way.

From Table 10.9, only 3.2 per cent women were found ready to practise contraception for family planning by spacing of children. Generally, it may be said that the whole concept of family planning by controlling spacing of children found little appeal. We had only a few women of the following kind.

Mrs. from Mirajgaon was 28 years old and had 3 children, 2 daughters and a son. She wanted one more son but, a little later. Therefore she took to the use of pessary.

Mrs. from Dhanore aged 25 had only 2 children. She wanted one more but not now. In order to postpone the next conception she expressed her intention to take to rhythm method.

A very large group, that is more than 20 per cent women of the favourable group were genuinely interested in contraception but were sure that their husbands would not approve of any such notions. Among these we had 2 groups. Women from one group frankly admitted that they were scared of their husbands and hence no practical step towards contraception was possible. The second group though favourable directed the investigator to their husbands so that the investigator could act as a mediator between the husband and wife. Thus,

Mrs. from Dhanore aged 27, had 3 children, one of them being a son. She was pregnant when the investigator interviewed her. Since she showed much interest in contraception our investigator explained to her various methods of contraception. Mrs. however could not practise any method as her husband was never sympathetic to her.

Mrs. from Dhanore aged 30 had 7 children, 6 of whom were living. Of these 2 were sons. Mrs. did not

keep good health and was tired of having more children. But her husband and mother-in-law were against contraception. According to them it was not necessary because they were well-to-do and could afford to support as many children as were born. Per capita annual income of the family was Rs. 400. According to Mrs. her husband did not mind having more children because he was not to bear them.

A Bhil woman from Dhanore aged 37 had 7 children 5 of whom were living. She was favourable to contraception; but, she was not likely to get any co-operation from her husband. He used to beat her. He always suspected that she had extra-marital relations. If she showed any inclination towards contraception, her husband would blame her as having vicious motives.

Mrs. from Bori was 26 years old and had 4 children, 2 of whom were living, a son and a daughter. She often got fits. It was reported that her husband always behaved contradictory to her wishes, never allowing her any freedom whatsoever. Mrs. was a pious woman while her husband was unscrupulous in his behaviour. She was so scared of her husband that she was talking with the investigator without his knowledge and was afraid that her husband would beat her for having a talk with the investigator. She had a mind to practise contraception but she could not even dream of doing it.

We had in the second group of women cases like that of

Mrs. a barber's wife who was 30 years old and had 10 children. 7 of these were living. Mrs. suffered from piles and had a very difficult labour in every maternity. She complained about this to her husband but to no effect. She therefore requested our investigator to act as a mediator and stop all her troubles by advising her husband to take to vasectomy.

Mrs. was 30 years old. She had 6 children, 3 of whom were living. Though an unwilling respondent in the earlier investigation, she responded well to the questionnaire on family planning because our investigator had helped her in her last maternity. She expected the investigator to open the topic of family planning with her husband so that matters will be simplified for her.

Mrs. from Nalwar, had 5 living children out of 7 born. She had tried an oral treatment for stopping child-bearing, but that did not work. She requested the investigator to explain various contraceptive methods to her husband and if he was unwilling to practise any, she was going to do it on her own. She however preferred oral treatment to all others.

As seen from Table 10.9 there were 13.4 per cent cases that were unable to comprehend actual practice of contraception. Among the favour-

able women belonging to this category we had a large majority for whom the contraceptive means seemed so complicated. Some of them who followed halfway were bothered as to the after effects of the contraceptives. Paucity of possible practice due to ignorance seemed most common in Dhanore. Generally women from this group showed genuine interest initially but when it came to the details of the various methods and their practice they cooled off. Thus

Mrs. from Mirajgaon aged 27 had 3 children out of 4 born. She was too weak to bear more children. The investigator suggested her practice of contraception and her husband also agreed. A pessary diaphragm seemed worth trying to the couple. The investigator explained the procedure of fitting the pessary. But the wife was afraid that some complications might arise if the pessary got stuck inside.

Mrs. from Dhanore, a Bhil woman aged 32 had 8 children all of whom were living. She herself approached the investigator to put a stop to her child-bearing. This she did with the consent of her husband. She used to eat wheat and jaggery in her pregnancy because it was supposed to be harmful to the health of an infant. To her misfortune however it never worked. She could not even count and was scared of the complexity of the contraceptives explained to her by the investigator. She therefore decided to send her husband to the investigator to get the contraceptives explained to him. He agreed to have vasectomy done on him. However, before he made his final decision, he said that he wanted to consult his father-in-law. But he never turned up.

Mrs. from Mirajgaon aged 37 had 7 children 6 of whom were living. She and her husband decided to have vasectomy to put a stop to child-bearing. In the end, however, the husband left the operation room due to the scare of the operation.

Mrs. from Bori aged 28 had 4 children, 3 of whom were living. When the investigator explained to her various methods of contraception Mrs. listened very intently. She was however lost in the complexities of the methods and was not likely to practise any in spite of help from her husband.

Mrs. from Bori, aged 30 had 4 children, 3 of whom were living. She belonged to depressed class. She stated that the contraceptives seemed scarily complicated.

Another small group of women comprising 6.2 per cent of the favourable cases favoured contraception generally but thought that its practice was unnecessary in their case. Some of them were old and some had their husbands away for large part of the year. This latter category of women was quite common in Mithbaon. Thus

Mrs. from Mirajgaon aged 32 belonged to artisan class. She had 5 children. According to her though family planning was a necessity for other women she herself did not need it as she had a large spacing between children. She got a child every fourth year and was not bothered about pregnancies.

Mrs. from Bori was 42 years old. She had 7 children. She and her husband both favoured family planning. But in their own case they did not need any contraceptive means because they abstained from any sexual relations. In their own terms, 'they lived like brother and sister'.

Mrs. from Mithbaon aged 28 had 3 children. Besides these 3, she had to look after a step daughter. Mrs. was favourable to contraception. But in her own case she thought that she would not need it because her husband had not seen her for the preceding 2 years, nor had he sent her any money.

Lastly there were, among the favourable group, 10 per cent women who favoured contraception but would defer its practice in their own cases. They wanted more children or more sons. Thus,

Mrs. from Dhanore was 28 years old. She was a Bhil woman having 6 children, 3 of whom were living. She had no son. She wanted sons and hence though favourable to contraception did not need it herself.

Mrs. from Mirajgaon, aged 27 had 2 living children—a son and a daughter—out of 4 born. She wanted more children particularly sons and hence she did not need family planning.

In the above we have presented a few case studies describing various shades in the attitude of those who favoured contraception. As previously explained, after ascertaining their initial responses, we proceeded to explain the several methods of contraception to those women who showed further interest in the subject. In Table No. 10.10, we give their classification according to the method they said they thought to be most suitable. The Table gives a classification of 200 women. They include all the 114 women who were willing to adopt contraception immediately and some others who were willing to consider its practice but not immediately.

The classification in Table No. 10.10 has been given separately for each of the five centres because, as it will be seen, the choice of specific contraceptive methods was highly localized. Among the five centres, Nalwar alone showed what might be called a varied response. More than half of the women at Mithbaon who said they favoured contraception did not favour going beyond abstinence. In a sense, it may be said that they were opposed to contraception. At Bori, Dhanore and the rest of

TABLE No. 10.10

Classification of women according to the choice of contraceptive method.

Contraceptive	Bori	Dhanore	Mirajgaon	Mithbaon	Nalwar	Total
Abstinence	—	—	1	38	2	41
Rhythm method	13	18	6	36	8	81
Oil pad	—	—	1	—	2	3
Pessary	—	2	14	—	6	22
Vasectomy	1	—	35	1	5	42
Salphingectomy	2	—	8	—	1	11
Total	16	20	65	75	24	200

Mithbaon, the choice was almost exclusively confined to the rhythm method which was the first thing our investigators explained. Oil pad, in general, did not find favour at any of the centres. The choice of pessary came from the two remaining centres, namely, Mirajgaon and Nalwar. The fitting of pessaries was demonstrated to these women though their continued use could not be watched. At Mirajgaon, though the choice was somewhat more varied than at the above-mentioned three centres, there was an overwhelming bias in favour of surgical means, particularly in favour of vasectomy. Here, more than half the respondents opted for vasectomy. A certain amount of favourable response to vasectomy also came from Nalwar.

The surprisingly large response to vasectomy at Mirajgaon needs explanation. In one of her early reports, the investigator at Mirajgaon reported to us that there were about 10 persons who favoured vasectomy above all other means. The women with whom our investigator had discussed the subject had discussed the matter with their husbands and their husbands had approached our investigator for further information. In order to test the genuineness of this response we informed the villagers that we were sending down two surgeons on a certain day. When the surgeons reached the village, 13 persons had enlisted for the operation. The surgeons completed the operation on 9 of them while the remaining 4 backed out for no reason other than fright of the operation.

About a month later, a request came to send the surgeons once again. 16 persons had enlisted this time of whom 5 were from the neighbouring villages. We sent down three surgeons and they completed the operation on 13 persons. The remaining 3 backed out last minute. Afterwards we had repeated requests from the neighbouring villages to send down the surgeons to their villages. It was also suggested to us that a number of persons who desired the operation felt shy about the publicity

it received. It was therefore suggested that we should camp the surgeons a little away from the village, say a small town, where the persons could go and get operated without undue publicity. This was of course an important point. We could not meet these requests for the fear of going much beyond the scope of our investigation.

In all the cases where we agreed to operate, express written consent was obtained from both the husband and his wife. As described above we operated upon 22 persons in all and 7 had backed out last minute out of fright. In the following we give a few personal and family details of these 29 persons. In Table No. 10.11, we give their classification according to their ages and the ages of their wives. It will be seen that in 20 out of 29 cases, the wives were below 37 years. In Table No. 10.12, we

TABLE No. 10.11.

Persons volunteering for vasectomy classified by their own age and the age of their wives.

Age of the husband	Age of the wife			Total
	32 & below	33—37	38 & above	
37 and below	8	1	—	9
38—42	1	8	1	10
43—47	—	2	1	3
48 and above	—	—	7	7
Total	9	11	9	29

give their distributions according to the number of children born to them, number of living children and number of living sons. It will be seen that all of them had more than 4 children born, more than 2 children living and at least one living son. About half of them had 8 or more children born, 6 or more children living and 4 or more sons living.

In Table No. 10.13, we give their classification according to their caste. It will be seen they were well distributed over all castes. As for education, 9 out of them were illiterate and 8 had received schooling above the fourth primary standard.

Nearly a year later, we tried to contact the 22 men from Mirajgaon who were operated upon, in order to know about their experience and feeling on the subject. We could not contact 3 out of them as they were away from the village. Among the remaining 19 whom we met, only one complained of local pain. None reported having repented the action. They were all content.

TABLE No. 10.12.

Persons volunteering for vasectomy classified by (i) number of children born, (ii) number of children living, and (iii) number of sons living.

No. of Children	Number of males according to		
	Children born	Children living	Sons living
1	—	—	1
2	—	—	3
3	—	2	7
4	—	4	10
5	4	7	4
6	3	4	3
7	7	5	1
8	6	5	—
9	4	1	—
10	5	1	—
Total	29	29	29

TABLE No. 10.13.

Persons volunteering for vasectomy classified by caste.

Caste	No. of males
Brahmins	3
Marathas	7
Intermediate Hindus	11
Depressed castes	3
Non-Hindus	3
Jain Oswals	2
Total	29

Let us now turn to the group of women who said they did not approve of contraception. There were 253 of them in all. 20 out of these did not give any reasons for their disapproval. In Table No. 10.14, we give a classification of the remaining according to the reasons of their disapproval.

TABLE No. 10.14.

Classification of women disapproving contraception according to the reason for disapproval.

Reason of disapproval	Number of women
Wanted more children	168
Contrary to Nature or God	60
Could support a larger family	5
Total	233

Thus it will be seen that a large majority, more than 70 per cent women disapproved contraception not on any general grounds but entirely on personal grounds. They wanted more children. In Table No. 10.15, we give their distribution by the number of children that were born to them and the number of living sons they had. It will be seen that only about 15 per cent of them had more than 4 children born to them. Hence if they understood either the purpose or the use of contraception mainly for family limitation and not for family planning, their disapproval of it in their own case appears understandable.

TABLE No. 10.15.

Classification of women who disapproved of contraception on grounds that they wanted more children by (i) number of children born and (ii) number of living sons.

No. of children or sons	No. of women with the said living children	No. of women with the said number of living sons
0	2	33
1	18	63
2	47	48
3	41	17
4	40	4
5	12	1
6	7	2
Above—6	6	0
Total	168	168

It will be seen from Table No. 10.14, that only a small number, only about one-fourth of those who disapproved contraception, disapproved it on general or on what might be called pseudo-religious grounds. If we relate this group to our total sample of 647 women covered by this investigation, it will be seen that they formed less than 10 per cent of the total. It is thus clear that opposition to contraception on general grounds was very small in the population covered by our investigation.

A point to be noted about women who disfavoured contraception on pseudo-religious grounds was that they had very often wrong notions regarding contraception. For instance, contraception was taken to be inducing abortion. When however they were asked about the reasons for being unfavourable to contraception, they reported the reason in a routine manner. Thus

Mrs. from Nalwar aged 30 had 4 children. She was pregnant and she appreciated the idea of having this as her last pregnancy. But she treated the investigator with spite and was not prepared to get any information regarding contraception from the investigator because contraception meant inducing abortion for her. The investigator kept her patience and explained to her how inducing abortion was not a means of contraception and how the contraceptives worked. Mrs. was glad to know that contraception did not mean inducing abortion. Still she stated that she disfavoured contraception because it was against religion or God.

Another instance of wrong notions regarding contraception was found in Mrs. from Mirajgaon. She came from artisan class. She had 5 children 4 of whom were living. She earnestly believed that contraception meant having no sexual relations and this according to her was likely to lead the husband to vicious behaviour. Moreover she thought that the investigator helped the village women with a drug to undo pregnancies. According to Mrs. therefore contraception meant going against nature.

Mrs. from Dhanore aged 25 had 4 children. She was against family planning because according to her death could take away any number of children and in order to avoid being childless she preferred to have as many children as she could have.

We give below a few cases of women who belonged to the category namely 'Others' in Table 10.4. This category comprised 21.8 per cent cases out of the total of 647 cases interviewed. It mainly included women who did not respond at all or were indifferent under one pretext or the other. This category was the most difficult to handle. There was no way of knowing whether women of this category were favourable to contraception or not and the reasons for their being so. Our investigator had to suffer insults and offences at their hands. Thus,

Mrs. from Dhanore a Bhil woman aged 36 had 6 living children out of 7 born. She did not like the investigator coming to her for the second time when already she had taken a lot of information from her for the earlier questionnaire. She received the investigator in such an unfriendly manner that our investigator failed to gather courage to talk to her about contraception.

Mrs. from Dhanore, a Bhil woman aged 29, had 5 children of whom 4 were living. She was unwilling to respond to the earlier part of the questionnaire relating to the last pregnancy she had. As soon as the investigator opened the topic of contraception, she left the house without a word leaving the investigator in the house.

Mrs. from Dhanore had 3 children. It was not possible to get any information regarding her attitude towards contraception because she turned the investigator out as soon as she entered her house.

Mrs. from Dhanore was 33 years of age. She had 6 children of whom 5 were living. She asked the investigator to sit inside her house while she herself left the house by the back door.

Another lady from Dhanore yelled at the investigator and told her before she entered that she wanted more children and this she could do without any help from the investigator. The lady was 32 years old and had 5 children.

An oil-presser's wife in Mirajgaon was 35 years old. She had 6 children, 4 of whom were living. Our investigator wasted a lot of time in persuading her to answer the questionnaire. But she did not answer. According to her no decent institution would expect the investigator to discuss such topics as family planning with the villagers. According to her all this nonsense was investigator's own creation.

As will be seen from the above description, there was large variation between different centres in respect of their responses to this part of the investigation. It is possible that there was something in the local circumstances of these centres which conditioned the responses of their respective populations. However, we are inclined to believe that more than anything else it was the personality and prejudice of the investigator and the accident of the village leadership taking one or the other view that mattered most. As a corollary, it also means that the attitudes of the population towards this subject are not yet set. The subject is new and the remarkable thing is that the population has little prejudice and a virtually open mind. In particular there are no religious dogmas to disapprove contraception. Hence the attitudes are formed as the subject is introduced and it seems difficult to avoid them being influenced by the mode of the investigation. It seems that a neutral investigation will bring forth generally favourable but rather passive attitudes as happened at Bori, Dhanore and Mithbaon. On the other hand, as happened at Mirajgaon, a more active or action-oriented investigation does not seem to meet with active resistance but in fact seems to bring forward more active responses.

CHAPTER XI

PUBLIC HEALTH

An attempt was made during this survey to assess the prevalence of illness in the surveyed areas. Information regarding the health of each individual in the surveyed areas was obtained through the general family schedule, for a period of one year preceding the date of enquiry. For this purpose, questions relating to (i) the type of illness (ii) month of illness (iii) duration of illness (iv) kind of treatment available (v) cost of treatment, etc., were asked. Moreover, cases of chronic diseases like tuberculosis and asthma were noted by a separate question. Information regarding permanent disabilities like blindness, deafness, dumbness or insanity was also asked. Thus the assessment of health standards in the surveyed areas was made relying chiefly on morbidity statistics rather than statistics relating to positive health.

In the kind of survey we conducted the level of accuracy was determined by the level of understanding of the interviewed affected partly by the interviewing tactics used. The diagnosis of the illnesses of the people was rarely made there being no medical facilities available. Besides, to report illness during the course of a year required stretching of the memory and the usual defects of enumeration of events spread over a period were likely to be present in the data. Minor illnesses could easily slip out of memory and differential weight in reporting illness was quite likely. Moreover the male investigators were not medically qualified while the female investigators were health visitors. Investigation among males was done by male investigators and among females by female investigators. This could make a difference in the interviewing methods though care was taken to make uniform the methods of interviewing.

Besides the above limitations, some illnesses having an important place in morbidity seemed to have been either omitted or inaccurately reported. The ignorance of the respondents coupled with the absence of any diagnostic aid was perhaps responsible for this. Moreover, some diseases like venereal diseases, leprosy or tuberculosis to which certain social stigma is attached may have been under-reported.

In the following we present the data collected regarding morbidity of health for children and adults separately. For children data were collected only for 4 Marathi-speaking centres. Data regarding infant mortality and weights of children under one year of age are also given as these are indicators of the standards of health of children. Taking weights of all persons would have been difficult and hence it was not done.

Illnesses of Children below 13 years of age and infant mortality data.

In considering morbidity of health of children, it is not out of place to start with infant mortality. In Table 11.1 we present data regarding deaths in various surveyed centres of children born in the year of survey. These data are available for all the 6 centres. The deaths in Table No. 11.1 obviously do not help to calculate the infant mortality rate for the surveyed centres as we have no data regarding deaths of children born before the year of survey and dying under one in the year of survey. In all the 6 centres together we had 107 deaths among 1455 born in the year of survey.

TABLE No. 11.1.
*Number of deaths among births of the year of survey and
deaths per 1000 births.*

Centre	Births during the year	Infant deaths among the births	Deaths per 1000 births
Bori	242	14	57.8
Dhanore	326	11	33.8
Mirajgaon	240	25	104.2
Mithbaon	151	6	39.7
Mudalgi	209	28	133.9
Nalwar	287	23	80.1
Total	1455	107	73.5

The highest number of infant deaths per 1000 of births during the year of survey occurred in Mudalgi while Dhanore and Mithbaon had a much smaller number of deaths compared to the other centres. The number of deaths for Dhanore and Mithbaon seem so small that one begins to look for possible under-reporting of deaths in these centres. But with the small data at hand allowance will have to be made for chance error and inter-locality comparisons seem almost out of question. Any further analysis of deaths done with a view to find out possible under-enumeration of deaths becomes difficult with the stage of knowledge of the mortality behaviour during the first year of age. We therefore only present a few facts about these deaths. 56 out of 107 deaths occurred during the first month of age of the infants born. Further, an analysis of deaths by the age of the mother showed that infants born to mothers younger in age died at a higher death rate. The relevant data are presented in Table No. 11.2. These are the only facts we have about infant deaths, among births of the year of survey.

TABLE No. 11.2.

Infant deaths per 1000 born during the year of survey classified according to the age of the mother.

Age of the mother in years	Number of births	Infant deaths	Infant deaths per 1000 births
13—17	106	11	103.8
18—22	431	37	85.8
23—27	383	25	65.3
28—32	307	17	55.4
33 and above	228	17	74.6
Total	1455	107	73.5

One indicator of the health of children as stated above could be the distribution of weights of children. Because it was easier to do so, we noted the weights of children below 1 year of age. Some resistance from the villagers was experienced in the matter of weighing the children as the villagers believed that weighing the children made them lose their health. Fortunately such cases were not many but the investigators had rather a tough time with the resisting villagers. In such cases the investigators were, however, instructed not to weigh the children if the villagers were not willing to allow it.

In Table No. 11.3 are given the weights of children below one year of age from the 6 centres. As seen from the table the average weight of children in the first 3 months of age was 8½ lbs. on an average. In the second 3 months of age it was 12 lbs., in the third 13½ lbs. and in the fourth 14½ lbs. It was thus noticed that there was little addition to the weights of children after the age of 6 months.

As for the reported illnesses of children below 13 years of age, in Table No. 11.4 are presented the number of reported illnesses per 100 of children in each centre during the year of survey. These data were collected only for 4 Marathi speaking centres as stated before. As seen from the table, the highest proportion of ailing children male as well as female was in Mithbaon and the lowest, in Bori. In Table No. 11.5 illnesses of children are classified into broad categories in which major illnesses or chronic diseases are almost absent. On the other hand, more than two-thirds of the illnesses are from cough and cold, minor fevers and diarrhoea. In the following, we have described each of the categories separately.

Minor troubles: This category included troubles like cough and cold, sore eyes, etc. which last for a short duration of less than a week. These formed a major portion of illness reported both in the case of male and female children covering more than 40 per cent of the total illness in the

TABLE No. 11.3.
Frequency distribution of infants upto 1 year of age according to their weight in lbs.

Age in months	Weight in lbs.																	Total	Average weight in lbs.
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
— 3	1	7	15	26	38	37	30	32	11	4	3	—	—	—	—	—	—	204	8.4
4— 6	1	—	3	2	4	10	13	22	32	40	43	11	11	2	2	2	—	198	12.0
7— 9	—	—	—	—	—	3	1	8	24	30	29	19	10	8	6	1	1	140	13.4
10—12	—	—	—	—	1	8	1	8	9	24	33	18	22	19	12	8	4	162	14.4
Total	2	7	18	28	43	53	45	70	76	98	108	48	43	29	20	11	5	704	11.8

TABLE No. 11.4.

Number of reported illnesses among male and female children per 100 children in each centre.

Centre	Number of illnesses	
	Male	Female
Bori	2.3	3.7
Dhanore	13.1	16.5
Mirajgaon	8.9	12.9
Mithbaon	14.4	27.4
Total ill per cent	9.7	12.7

surveyed centres as seen from Table 11.5. In Dhanore and Mithbaon, nearly half the illness was of this kind. In Mirajgaon though the proportion in this category was low, it was made up by the higher proportion in the category of minor fevers. It was likely that in the case of cough and cold which was perhaps accompanied by fever, the illness was reported either as fever or as cough and cold.

Fevers. Minor and Enteric: The category of minor fevers covered about 20 per cent of the reported illness among males as well as females as seen from Table 11.5. In Mirajgaon, as stated before, about 47 per cent of the total illness among females and 30 per cent among males was under this category. The reported enteric fevers on the whole covered 5 per cent of the illness among males and females. In Bori and Mirajgaon respectively 26 and 10 per cent of the total cases of illness were reported as of enteric fevers. In both these centres on the whole the illnesses were reportedly smaller in number than the other 2 centres and it was specially so in Bori. In Mithbaon and Dhanore, the cases of enteric fever were few. It is not impossible that in the absence of good medical help as was the case in these two centres the distinction between minor and enteric fevers could not be made. In Mirajgaon, there being a general hospital, cases of enteric fever might have been diagnosed and hence reported.

Diarrhoea and dysentery: This was one of the common illnesses among children covering 10 per cent of the total illness as seen from table 11.5. Mirajgaon and Dhanore though ranked above the other two centres, diarrhoea did not include more than 12 per cent of the total illness in these centres.

Rickets: The number of male and female children having rickets was 34 in all the centres together thus explaining about 3 per cent of the total illness in the surveyed areas.

TABLE No. 11.5.

Male and female children according to type of illness.

Type of illness	Bori		Dhanore		Mirajgaon		Mithbaon		All 4 centres*	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Minor troubles like cough and cold	7	11	118	125	25	23	81	115	231	274
									(45.1)	(37.5)
Minor fevers	4	3	39	43	38	84	12	24	93	154
									(18.1)	(21.1)
Enteric fevers	6	13	2	4	20	18	—	2	28	37
									(5.5)	(5.1)
Diarrhoea	1	5	30	20	16	22	14	19	61	66
									(11.9)	(9.0)
Rickets	2	—	7	8	2	2	7	6	18	16
									(3.5)	(2.2)
T.B., asthma	1	1	3	1	—	1	8	39	12	42
									(2.3)	(5.8)
Small-pox, chicken-pox, and measles	2	9	14	53	2	15	14	37	32	114
									(6.2)	(15.6)
Epidemic diseases like cholera, plague	—	—	4	—	5	3	2	3	11	6
									(2.1)	(0.8)
Others	3	—	2	1	16	12	6	8	27	21
									(5.3)	(2.9)
Total	26	42	219	255	124	180	144	253	513	730
									(100.0)	(100.0)

M = Males. F = Females.

* Bracketed figures give the percentage in each category of the total suffering.

T.B. and Asthma: There were 2.3 per cent male and 5.8 per cent female children of the total ill children coming under this category. But most of the cases of this category came from asthma in Mithbaon, 5 per cent of the illness among males and more than 15 per cent among females in Mithbaon being of this type. It was the peculiarity of this centre that people old as well as young suffered from asthma in unusual numbers. No case of T.B. was reported in any of the centres as could be expected among children.

Measles, chicken-pox, small-pox, and similar virus diseases: As reported 6.2 per cent of the illness among male children and 15.6 per cent of the illness among female children came under this category. There,

seemed no reason for getting such a large difference in the incidence of the illness among males and females. It is suspected that a part of the difference could be attributed to the investigator differences. In Dhanore we had the highest percentage of female children, namely 20, coming under this category. 60 per cent of all the cases coming under this category were of measles, 18 per cent of whooping cough, 10 per cent of chicken-pox, 8 per cent of small-pox and the remaining of mumps, etc.

Illnesses affecting male and female adults:—Information regarding the illnesses of adults was collected in all the 6 centres. In Table No. 11.6 we present the number of reported illnesses per 100 of population in each of the surveyed centres for males and females separately. As seen from the table the differences in the incidence of illness among males and females are striking in the 2 Kannada-speaking centres. Female investigators in all the centres were qualified health visitors as stated before while male investigators were not. This perhaps caused differences in the above 2 centres and also in Mithbaon. If we consider males and females together and take the 2 Kannada centres as either reporting too many minor troubles of females and under-reporting the troubles of males as seems to be the case, Mithbaon appeared the worst among all the centres as far as the health of adults was concerned.

TABLE No. 11.6.

Number of ill persons per 100 male and female adults.

Centre	Adults	
	Male	Female
Bori	4.3	4.0
Dhanore	10.1	10.2
Mirajgaon	11.9	11.5
Mithbaon	17.7	27.8
Mudalgi	6.4	42.8
Nalwar	8.1	46.2
Total ill per cent	9.4	23.0

Before proceeding to the analysis of the collected data, a few words about the classification of illnesses seem necessary. The quality of the data being what it is, classification had to be rather broad. Thus fevers of all types were put together without distinguishing them as enteric, malarial or otherwise as such distinction was not likely to be reported. This kind of lumping of illnesses having similar symptoms was not impossible in other categories of illnesses also. In Table No. 11.7 the illnesses have been classified and percentage in each has been given for various centres.

TABLE No. 11.7.

Male and female adults according to the type of illness

Type of illness	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		Total 100 M. =	Per- centage M.	Total 100 F. =	Per- centage F.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.				
Fevers	63.8	45.9	47.6	67.7	45.9	40.9	34.6	27.3	51.7	35.8	53.6	65.1	479	47.3	1323	51.2
Digestive disorders	9.6	12.2	16.0	7.4	16.4	12.3	11.2	10.6	12.6	14.3	12.0	7.3	137	13.5	244	9.4
Respiratory illness (Total)	7.2	4.0	12.6	6.4	16.0	11.4	19.1	19.3	12.6	10.9	10.9	8.6	142	14.0	286	11.0
(i) Asthma	1.2	1.3	1.4	0.5	1.3	4.1	9.3	13.8	2.3	3.4	7.3	2.2	43	4.2	124	4.8
(ii) T.B.	—	2.7	—	2.8	2.2	0.4	0.9	1.5	8.0	2.2	1.6	0.7	17	1.7	32	1.2
Rheumatic troubles	1.2	8.1	1.0	5.1	0.9	9.5	6.1	9.2	—	4.4	1.0	1.1	20	2.0	115	4.5
Female diseases	—	17.6	—	3.7	—	7.3	—	9.5	—	22.1	—	2.5	—	—	190	7.3
Others	18.1	11.1	22.8	9.7	20.8	18.6	28.8	24.0	23.0	12.5	22.5	15.4	235	23.2	429	16.6
Total 100 =	83	74	206	217	231	220	214	545	87	321	192	1210	1013	100.0	2587	100.0

There were 282 additional cases in Mudalgi among females that reported minor ailments which according to them did not incapacitate them for work.

Fevers: As seen from the table 47 per cent of the health troubles among males and 51 per cent among females were from fevers. Fevers seemed to be the most important category among illnesses. In the total of 1,800 cases of fever among males and females of all the centres only 64 i.e. 3.5 per cent cases of fevers were of typhoid as reported. A significant contribution, to this category, it was felt, might have been from Malaria which supposedly has high incidence in areas with poor drainage and little use of insecticides. It was only in Mithbaon and Dhanore that there was natural prevention of stagnation of water to certain extent, Dhanore being situated on a higher level than the neighbouring area and Mithbaon having a sandy soil absorbing water. In other centres there seemed no attempts to drain out slop water except in Mudalgi which had specially good hygienic conditions for reasons mentioned earlier. Females in Nalwar showed an unusually high incidence of fever. In Dhanore, the percentage in this category though high, the total number of ill persons was small as compared to Nalwar.

It was also suspected that some cases of tuberculosis might have been reported as of mere fevers. For instance, about 9 per cent of the male and female cases of fever in Mithbaon were of chronic fever and so was true of 7.5 per cent of cases of fever in Mudalgi. In Table No. 11.8 are presented the durations of fevers in the various surveyed centres. As seen from the table about one-third of the fevers were of duration shorter than a week. The average duration of fever was higher in Mithbaon, Bori and Nalwar than in the other centres.

An idea about the season of onset of fever can be had from Table No. 11.9. It was in the monsoons that the incidence of fever was the highest. In some rural areas monsoon was, therefore, supposed to be the season of death.* Digestive troubles also were more common in monsoons as will be seen later. Another important feature of Table No. 11.9 is the large incidence of fever in winter in Dhanore. This was a little unusual. Probably the love of the Bhils for the open air and regular bath in the river water even in winter, exposed them to cold in winter.

Digestive disorders: These covered about 13.5 per cent of the male illness and 9.5 per cent of the female illness as shown in Table No. 11.7. This category included mainly diseases like diarrhoea and dysentery as well as minor disorders like stomach-ache, etc. It is said of our rural areas that they have diarrhoea and dysentery common in the monsoons probably because the river and well water are contaminated during the monsoons on account of the soil and subsoil drainage which increases the water-borne diseases and infections of the above type. The

* Because of this belief in Mirajgaon certain villagers though interested in getting operated for vasectomy did not get operated because these were conducted in monsoons, the season of death.

TABLE No. 11.8.

Adults suffering from 'fever' classified according to duration of fever.

Duration of fever	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		TOTAL	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
— 1 week	5.7	5.8	43.9	45.7	24.5	10.0	9.5	13.4	11.1	27.8	22.3	46.8	22.3	37.7
— 4 weeks	66.0	61.1	43.9	42.8	55.7	51.1	50.0	43.6	62.2	39.2	43.7	34.8	51.6	38.8
— 3 months	15.1	20.4	8.3	8.8	15.1	23.3	27.1	23.5	17.8	8.7	26.2	10.3	18.2	12.6
—11 months	13.2	8.7	4.1	—	3.8	2.2	9.4	4.7	8.9	3.5	2.9	3.8	6.0	3.5
12 months and above or mostly chronic cases	—	2.9	—	2.0	0.9	2.2	2.7	14.1	—	10.4	4.9	1.4	1.7	3.8
Duration not specified	—	—	—	0.7	—	1.1	1.3	0.7	—	10.4	—	2.9	0.2	3.6
Total 100 =	53	34	98	147	106	90	74	149	45	115	103	788	479	1323

season of onset of this category of illness has been presented in Table No. 11.10.

TABLE No. 11.9.
Incidence of fever classified according to the season of onset.

Centre	Season of onset									
	Summer		Monsoons		Winter		Unspecified		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Bori	13	4	27	15	11	13	2	2	53	34
Dhanore	14	13	28	56	56	75	—	3	98	147
Mirajgaon	37	26	44	19	25	21	—	24	106	90
Mithbaon	11	26	28	60	19	36	16	27	74	149
Mudalgi	21	40	15	27	9	28	—	20	45	115
Nalwar	16	272	26	277	42	175	19	64	103	738
Total	112	381	168	454	162	348	37	140	479	1323
Total per cent in each season	23.4	28.8	35.1	34.3	33.8	26.3	7.7	10.6	100.0	100.0

TABLE No. 11.10.
Incidence of digestive disorders classified according to the season of onset.

Centre	Season of onset									
	Summer		Monsoons		Winter		Unspecified		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Bori	1	2	3	4	1	3	3	—	8	9
Dhanore	2	2	13	8	13	2	5	4	33	16
Mirajgaon	8	4	20	9	6	7	4	7	38	27
Mithbaon	5	7	8	19	7	16	4	16	24	53
Mudalgi	3	14	4	10	3	11	1	11	11	46
Nalwar	1	28	5	42	2	9	15	9	23	88
Total	20	57	53	92	32	48	32	47	137	244
Total per cent in each season	14.6	23.4	38.6	37.6	23.4	19.7	23.4	19.3	100.0	100.0

Respiratory illnesses: This was the second important category covering 14.1 per cent of the total male illness and 11.1 per cent of the total female illness as seen from Table No. 11.7. This category included troubles like cough and cold as well as major illnesses like pneumonia,

tuberculosis and asthma. As seen from Table No. 11.7 the highest proportion in this category both in the case of males and females was found in Mithbaon, more than 70 per cent of female illness and 50 per cent of male illness in this category being from asthma of chronic nature prevalent in Mithbaon. There were 75 females and 20 males reporting asthma in Mithbaon. There were in actuality 137 females and not 75 females that were asthmatic in Mithbaon, but in certain cases if there was some complaint besides asthma, that was reported under illnesses of the year and asthma was reported among permanent disabilities. Of the total of 167 cases of asthma as given the Table No. 11.7 about 57 per cent were from Mithbaon and only about 43 per cent were from the other 5 centres. Due to asthma the proportion of chronic ailments in general was raised much higher in Mithbaon than in the other centres. About two-thirds of the females reporting asthma belonged to the advanced age group above 45 years. In Table No. 11.11 the cases of asthma have been analysed according to the age of the female and male adults.

TABLE No. 11.11.

Male and female adults suffering from 'asthma' classified according to age.

Centre	Age groups								Total	
	13-29 yrs.		30-44 yrs.		45-54 yrs.		55 and over		M.	F.
	M.	F.	M.	F.	M.	F.	M.	F.		
Bori	—	—	—	—	—	—	1	1	1	1
Dhanore	2	—	1	—	—	—	—	1	3	1
Mirajgaon	—	1	—	2	2	2	1	4	3	9
Mithbaon	2	10	5	15	4	19	9	31	20	75
Mudalgi	—	1	—	4	1	2	1	4	2	11
Nalwar	—	3	4	7	7	9	3	8	14	27
Total	4	15	10	28	14	32	15	49	43	124

The number of cases of reported T.B. seems to be small in all the centres. As mentioned before there is a possibility that some cases reported as of chronic fever belonged to this category of illness.

Among other respiratory illnesses only 5 cases were reported in all the centres together. 13 cases of chronic cough were reported in Mithbaon, 10 of them being of females. As regards other respiratory illnesses like cough and cold or pain in the chest, etc. Mithbaon, Mirajgaon and Dhanore included an appreciable number of cases.

Rheumatism: This illness covered 2 per cent of the male illness and 4.5 per cent of the female illness as is shown in Table No. 11.7.

Excepting for Mithbaon no other centre had reported any significant number of cases of rheumatism. In Mithbaon, however, 10 per cent of the total illness was from rheumatism.

Female diseases: A separate category had to be allotted to the diseases which were connected with the female reproductive system. Puerperal morbidity, venereal disease and anaemia were included in this category. About 7.3 per cent of the total female illness came under this category including 190 cases in all. Of these 22 were of venereal disease, 19 coming from Mudalgi. Of the total of about 190 cases in this category one-fourth had a duration of less than a month and about one-third were more or less chronic.

Others: The last group of illnesses namely 'Others' included a variety of illnesses, major as well as minor, acute as well as chronic which could not come under other categories. Here, for instance, we had some stray cases of paralysis, 62 cases of leprosy, 37 of them being from Mirajgaon. Rest of the illnesses included in this category were like headaches, sore eyes, etc. In all the centres together 22.6 per cent of the illness among males and 16.1 per cent among females was of this category as seen from Table No. 11.7.

No diseases of an epidemic nature like plague, cholera, etc., were reported to any significant extent. As for venereal diseases among males, these were put in the category 'Others' their reported number being unexpectedly low. Only 9 cases in Nalwar and one case in Mudalgi were reported as of V.D.

In collecting the data regarding morbidity one of our objects was to get the number of days lost to work due to illness. In Table No. 11.12 are presented the average number of days of illness per ailing person. In the same table are also presented the average number of days lost per adult male and female due to inactivity of those that were ill. Thus on an average 7 days per year of adult life were wasted in being ill among males and 18 among females of the surveyed centres.

The above discussion related to the various illnesses from which the population of the surveyed areas suffered during the year of survey. Besides these there were people permanently disabled for work and these had to be taken into account in the consideration of morbidity. The disabilities commonly found were blindness, asthma, insanity, deafness and dumbness and diseases like leprosy, etc. It was quite possible that certain illnesses of a chronic nature were reported both as illnesses of the year of survey and also as permanent disabilities.

Considering all the 6 centres together, 4.8 per cent of the male adults and 6 per cent of the female adults were disabled permanently. Among the children below 13 years of age 1.2 per cent males and 1.6 per

TABLE No. 11.12.
Number of working days lost due to illness.

	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		All 6 centres	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Total number of adults	1917	1864	2036	2136	1938	1907	1212	1962	1353	1408	2376	2617	10832	11894
Total number of ailing adults	80	73	208	215	230	189	208	507	86	272	190	1117	1010	2854
Working days lost per year due to illness per ailing adult	70.3	109.6	48.8	60.2	47.7	83.8	100.5	179.2	78.3	142.3	136.0	46.1	78.8	76.3
Working days lost to illness per year per adult	2.9	4.3	4.9	6.1	5.7	8.3	17.2	46.3	4.7	27.5	10.9	19.7	7.3	18.3

cent females were permanently disabled. For children we had data only for 4 centres as stated earlier.

The total number of disabilities and the percentage of them that were from birth are noted in Table No. 11.13 for each of the centres. As indicated by the table about 10 per cent of the disabilities among adults and 15 per cent among non-adults were from birth. This meant that about 5 adults out of 1000, and about 2 non-adults out of 1000 were disabled from birth. In the case of adults it is not impossible that certain disabilities which were perhaps contracted in early life were reported as being from birth.

In Table No. 11.14 the disabilities are classified and the number with each kind of disability in each of the surveyed centres is presented. In the following the various disabilities are considered separately.

Blindness: Among the reported disabilities total as well as partial blindness seemed the most frequent. It covered about 31 per cent of the total disabilities. We had the largest percentage of blind people in Bori where about 55 per cent of the total disability was due to loss of eyesight. In this centre however the blindness was not reported as of one eye or both eyes. The reported causes of blindness are presented in Table No. 11.15. There is a large number of cases wherein the causes of blindness are not reported. Yet as seen from the table, 37 per cent of the blindness resulted from small-pox. Another important cause of blindness was reported to be sore eyes.

Asthma and Tuberculosis: Asthma has already been discussed among the illnesses during the year of survey. Asthma being very often chronic it was considered as one of the permanent disabilities. More than one-fourth of the total disability in the surveyed areas was due to asthma. Among the 328 adults suffering from asthma 46 per cent were from Mithbaon and the others were from the remaining 5 centres. One point to be noted about the disabilities resulting from asthma, tuberculosis, etc. was that they could come as ailments of the year under survey as well as permanent disabilities. There were two separate questions in the questionnaire to collect information about the preceding year's illness and about permanent disabilities. In the actual reporting if a person suffered from any other illness during the year of survey besides the usual disabling illness, that was reported under the illnesses of the year and asthma or tuberculosis was reported only under permanent disabilities. This resulted in the discrepancy between the number that was reported as ill due to asthma or tuberculosis under last year's illnesses and that under permanent disabilities. This discrepancy though small in the case of tuberculosis was quite marked in the case of asthma. Thus in Table No. 11.14, 328 cases of asthma are reported under permanent disabilities while in Table No. 11.7, only 167 cases are reported as due to asthma under

TABLE No. 11.13.

Total number of the disabled and disabilities from birth among the disabled males and females.

	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		TOTAL	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Total number of disabled adults	120	89	76	54	114	97	98	216	31	111	82	143	521	710
Percentage of adults disabled from birth	14.2	10.1	5.3	13.0	6.1	8.2	11.2	7.9	19.4	9.9	12.2	5.6	10.6	8.5
Total number of disabled non-adults	29	12	8	10	15	7	14	51	No information available regarding disabilities among non-adults			6.4	8.0	
Percentage of non-adults disabled from birth	6.9	16.7	50.0	10.0	13.3	57.1	28.6	5.9				17.2	12.5	

TABLE No. 11.14.

Distribution of adults and non-adults according to type of disability.

Type of disability	BORI		DHANORE		MIRAJ-GAON		MITHBAON		MUDALGI	NALWAR	TOTAL	
	Adults	Non-adults	Adults	Non-adults	Adults	Non-adults	Adults	Non-adults	Adults		Adults (six centres)	Non-adults (four centres)
1. Asthma	30	—	24	—	87	—	151	51	31	55	328*	51
†2. T.B. and Chronic cough	5	—	6 + 36	—	7	—	13	—	17 + 11	10	58* + 47	—
3. Blindness	126	31	28	6	60	7	58	3	31	76	379	47
(i) Both eyes	Not given		21	2	25	5	35	1	23	57	—	—
(ii) One eye	Not given		7	4	35	2	23	2	8	19	—	—
4. Deafness	4	1	8	1	17	6	12	1	7	8	56	9
5. Dumbness	3	—	3	—	3	4	6	—	1	5	21	4
6. Disability in foot or hand	25	4	9	8	41	4	30	6	21	48	174	22
7. Leprosy	11	1	7	—	37	—	—	—	2	5	62	1
8. Insanity	5	3	6	1	4	—	39	2	18	15	87	6
9. Others	—	1	3	—	5	1	5	2	3	3	19	4
Total	209	41	130	16	211	22	314	65	142	225	1231	144

* These cases of Asthma and Tuberculosis do not agree in number with those given in Table 11.7 as often such cases if they suffered from other ailments during the year of survey reported that ailment and reported asthma only as a disability.

† The figures given with + sign in this row refer to cases of chronic cough that were suspected of T.B. by the investigator.

TABLE No. 11.15.

Reported reasons for the loss of eye-sight in the surveyed centres.

Reasons for the loss of eye-sight	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		TOTAL	
	A.	N.A.	A.	N.A.	A.	N.A.	A.	N.A.	A.	N.A.	A.	N.A.	A.	N.A.
Small-pox	47	3	5	1	5	1	4	—	2	—	14	—	77	5
Sore-eyes	29	18	2	1	7	4	1	2	8	—	9	—	56	25
Severe head-ache	5	—	6	—	9	—	3	—	2	—	—	—	25	—
Accidents	9	—	1	—	9	—	5	—	4	—	1	—	29	—
Maternity	4	—	—	—	—	—	—	—	—	—	—	—	4	—
Aging	7	—	4	—	8	—	18	—	8	—	7	—	47	—
Cause unspecified, and other causes	25	10	10	4	22	2	32	1	7	—	45	—	141	17
Total	126	31	28	6	60	7	58	3	31	—	76	—	379	47

A. = Adults.

N.A. = Non-adults.

the preceding year's illness. So also in the case of tuberculosis, 58 cases are shown in Table No. 11.14, while only 49 are shown in Table No. 11.7. Besides the 58 cases of tuberculosis there were 47 cases of chronic cough as shown in Table No. 11.14. These were suspected of tuberculosis by our investigator.

Deafness and Dumbness: Among the disabilities reported, deafness also formed an appreciable percentage including nearabout 5 per cent of the total that were disabled. As for deafness it was expected to be common in old age. Hence cases of deaf persons above the age of 62 were not included among permanent disabilities. There were 16 such cases. The age distribution of the remaining deaf persons is presented in Table No. 11.16 for males and females, separately. There were only 21 cases of dumbness among adults of the 6 surveyed centres.

TABLE No. 11.16.

Age distribution of deaf adults from the 6 centres.

Age in years	Males	Females
—32	5	18
33—52	5	17
53—62	6	10
Total	16	40

Insanity: 48 cases of insanity were reported in the 5 centres other than Mithbaon while 39 cases were reported only in Mithbaon. The insanity among males was negligible and most of the reported cases of insanity were of females.

Leprosy: This disability included an appreciable number in the centre at Mirajgaon. There were 37 cases of leprosy in this centre, while in all the remaining centres put together there were only 25 cases. The incidence of leprosy in Mirajgaon was enquired into by a special survey for reasons mentioned earlier in the village notes. A team of 3 medical experts including one leprosy specialist visited Mirajgaon and examined about 150 households in the village trying to cover all the houses containing the suspected persons without making them conscious of being examined for leprosy. This special enquiry regarding leprosy did not cover all the households in the village nor were the 150 households selected for survey randomly selected. They were mostly the households in Mirajgaon, leaving out those that were far off from the main village site. No household was however left out that had reportedly a leper inmate. The presence of 37 cases in Mirajgaon meant an incidence rate of about 9 per 1000 of popu-

lation. This incidence though not low was lower than the suspected incidence and the village did not really deserve the title 'leper-home' that it had.

Disabilities in foot or hand: Under this category were included the crippling of hands and feet due to accident or disease. As observed from Table No. 11.14 this category included 14 per cent of the total disability, in the 6 centres. In Nalwar, such disabilities covered 21 per cent of the disability in the locality, most cases being of lame persons or of persons with paralysed foot. We also had 5 cases of elephantiasis here. Next to Nalwar came Mirajgaon wherein about the same proportion of cases was reported under this category as in Nalwar. But the disabilities here were often those of hand. In the centre at Mithbaon 10 per cent of the disability belonged to this category. Here disablement of feet due to diseases was more marked.

The foregoing discussion will enable us to have an idea regarding the differential morbidity of health in the surveyed centres. In addition to the differences in the natural climatic conditions, there were differences in the diet habits, which might have resulted in differential morbidity. The data regarding diet habits are discussed in the last chapter, though diet and morbidity are not linked. Among other factors responsible for morbidity of health, sanitary conditions were also important and there was not much difference in the conditions obtaining in the various surveyed centres.

Environmental hygiene was low in almost all the centres. Sanitary arrangements like drainage facilities, provision of latrines, etc., were extremely inadequate and unsatisfactory. The water, chiefly from the rivers and the wells, also got contaminated in the absence of any protections. The absence of these fundamental conditions for healthful life was largely responsible for the morbidity in the surveyed areas. The housing conditions were injurious to health. There was complete absence of light and air in many of the houses. A window as a contrivance for letting in air and light was rarely employed. In monsoons, many houses had wet mud-walls and floors, rain-water not being drained away.

Lack of medical relief or preventive and curative care was another factor, having a considerable bearing on the problems of health. In Bori there was no medical practitioner. But the Local Board in Bori had maintained a medical chest for the use of the villagers in which were kept many patent medicines. In Dhanore there was a Mission hospital that provided medical treatment to the villagers for a nominal charge. In Mirajgaon there was a hospital run by the Local Board in which ordinary medical treatment was available for a nominal charge. But often the villagers could not afford to spend on the injections and similar kind of treatment that was suggested but was not free. In Mithbaon there were

3 medical practitioners who were qualified though at a low level. In Nalwar there was no medical help available. In Mudalgi one medical practitioner visited the village periodically. Besides these in almost all the centres there were two or three other persons that practised curing of diseases by reciting some magic words. These were known as 'Mantriks'. Villagers of the surveyed localities took treatment for their illnesses from the various sources described above.

On the whole the medical practitioners available in these areas were not well qualified. Further, villagers approaching them for relief, wanted to manage either without money or within sums which could not purchase the treatment needed. Under these circumstances, the private practitioner estimating the capacities of the patient suggested remedies that could suit the pocket of the patient, even when the practitioner doubted their usefulness. On the other hand, the villager-patient being scared by the money requirement of the treatment went to the practitioner only when the patient seemed incurable by other available methods.

In spite of the fact that money was the chief determining factor in the method of treatment employed for cure, it will be seen from Table No. 11.17 that next to home-remedies, an approach to medical practitioners was quite often resorted to by the villagers. It was only in the centre at Dhanore that the medical treatment available in the Mission hospital was almost free and still it was not taken advantage of, by the Bhils, the majority community of the area. This community believed in its own remedies consisting of herbs and roots of plants. But in most of the other centres, presence of the medical practitioner was taken advantage of. Generally as seen from Table No. 11.17 it was males who approached medical practitioners more often than females and it was females who approached 'Mantriks' more often than the males. It is, however, to be noted, that the percentage of those going to Mantriks was very low in most of the centres. It may be that females would have consulted female medical practitioners. But these were not available in the villages.

In Table No. 11.18 is presented the analysis of expenditure incurred for treating illnesses in the surveyed areas. As is evident from the table, the percentage of persons getting free treatment from a dispensary was negligible i.e. less than 3 per cent in all centres except Mirajgaon. It was only in Mirajgaon centre that 12 per cent males and 18 per cent females got free treatment from the dispensary. Invariably in all the centres except Dhanore money spent on male adults exceeded that spent on female adults. The percentage of male adults spending more than Rs. 20 during one year for treatment varied from 14 to 59 in the six centres and for females the corresponding percentage varied from 6 to 29. Data regarding expenditure for illnesses of the non-adults are presented in Table No. 11.19. As seen from the table expenditure of Rs. 20 and above per

TABLE No. 11.17.

Percentage distribution of male and female adults, classified according to treatments employed to cure the illnesses.

Treatment taken	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR		All 6 centres	
	M. %	F. %	M. %	F. %	M. %	F. %	M. %	F. %	M. %	F. %	M. %	F. %	M. %	F. %
Doctors	28.1	12.8	17.5	16.4	73.6	53.6	55.4	51.6	68.6	23.7	52.1	12.1	50.1	25.4
Patent medicines	28.1	19.2	5.8	1.9	0.4	7.7	3.7	5.7	—	7.2	0.5	2.9	4.4	5.0
'Mantrika'	2.4	26.0	16.0	23.5	0.9	2.3	0.5	1.2	2.3	8.3	1.0	4.4	4.2	5.4
Domestic traditional remedies or no treatments	41.4	42.5	60.7	58.2	25.1	36.4	40.4	41.5	29.1	65.8	46.4	80.6	41.3	64.2
Total 100 =	82	73	206	213	235	220	213	506	86	599	192	1190	1010	2801
Information about the type of treatment not given	1	1	4	—	—	—	1	39	1	4	—	20	3	68

TABLE No. 11.18.

Percentage distribution of ailing male and female adults according to the expenditure for treating the illnesses.

Expenditure on treatment	BORI		DHANORE		MIRAJGAON		MITHBAON		MUDALGI		NALWAR	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
No treatment	13.3	21.6	16.0	34.1	9.1	17.3	1.4	10.5	16.1	29.2	20.9	65.5
Treated free	4.8	—	1.5	2.8	11.7	18.2	2.3	0.9	3.4	1.8	2.6	2.0
Household treatment and expenses not given	22.9	31.1	47.5	27.2	13.8	15.9	33.3	30.6	4.6	40.4	1.0	17.0
Less than Rs. 10	22.9	18.9	14.1	8.3	18.6	19.5	7.9	11.4	9.2	13.6	15.6	5.6
Rs. 10 to Rs. 20	6.0	12.2	7.3	13.8	18.6	9.1	16.4	16.9	8.1	4.6	13.0	3.8
Above Rs. 20	30.1	16.2	13.6	13.8	28.2	20.0	33.7	29.7	58.6	10.4	46.9	6.1
Total 100 =	88	74	206	217	231	220	214	545	87	603	192	1210

ailing non-adult was not as common as among male adults. But on the whole expenditure on male children was higher than that on female children in all the centres.

TABLE No. 11.19.

Percentage distribution of ailing male and female non-adults according to the expenditure for treating the illnesses.

Expenditure on treatment	Bori		Dhanore		Mirajgaon		Mithbaon	
	M.	F.	M.	F.	M.	F.	M.	F.
No treatment	30.8	58.1	18.7	62.1	13.0	27.8	7.6	16.0
Treated free	3.8	2.3	3.7	3.1	19.5	27.2	4.2	2.3
Household treatment & expenses not given	15.4	16.3	54.2	19.2	8.9	9.4	29.2	28.0
Less than Rs. 10	38.5	16.3	15.1	9.4	31.8	23.3	17.4	24.9
Rs. 10 to Rs. 20	3.8	—	3.7	3.5	12.21	6.7	22.9	12.8
Above Rs. 20	7.7	7.0	4.6	2.7	14.6	5.6	18.7	16.0
Total 100 =	26	42	219	255	124	180	144	253

That was how the morbidity of health and its treatment in the various surveyed localities appeared from the analysis of the information supplied by the villagers to our investigators. The insanitary conditions and the low level of consumption of protective foods left the villagers exposed to diseases, quite unprotected, as will be seen from the following chapter.

CHAPTER XII

DIETARY HABITS

In the surveyed areas, we wanted to observe the level of nutrition of the population and see if there were any material differences in their dietary habits. We therefore conducted diet surveys in the head-quarter villages of the surveyed localities. It was not within the scope of the present enquiry to establish any relation between diet and morbidity of health. An attempt was made only to assess the level of nutrition of the surveyed areas. The questionnaire used for the diet survey has been presented at the end of Chapter I.

For the above purpose a 10 per cent sample of households was selected in the head-quarter villages of the surveyed centres. The investigator visited the selected households preferably in the afternoons and kept aside measured quantities of cereals or flour that were usually more than enough for the family for the following 24 hours. Afternoons were selected for the visit because women were expected to have leisure at that time of the day. The following day our investigator revisited the households and saw how much of the weighed quantity of cereal or flour was remaining unconsumed or, by how much more, it had to be supplemented, if needed. In the case of consumption of pulses, vegetables and other items of daily diet, estimates were made from the information supplied by the housewife regarding the quantity of each item required for the day. In case there were no stocks of cereals in any household out of which to weigh, the investigator estimated the quantity necessary for a day from the information regarding daily earnings of the household and the purchases made thereafter for food. Proportion of such cases was of course not high.

In addition to the requirements of a specific day's diet, information relating to the consumption of non-cereal protective foods such as milk, fruits, sweet oil, sugar, jaggery, fats of all kinds, fish and meat, etc. the cost of each item consumed, the frequency of consumption of each, was assessed. As for consumption of milk, the quantity consumed for drinking purposes and that for other purposes was also asked of the interviewed. The investigator collected data regarding the menu for each morning and evening meal for 7 days as these were likely to give an idea regarding the change in the daily diet of the population. Questions regarding seasonal variation in the diet were asked and special notes about the starvation were made by the investigators.

During the course of this procedure, the investigators had to face certain resistance from the interviewed. Not realising the utility of the information required by the investigator, the housewife considered it an encroachment on her essentially private affairs and sometimes, it was only after a great deal of persuasion by the investigator that the housewife allowed the quantities of cereals to be weighed. The investigators were however instructed not to get information from unwilling housewives as it was of no use getting information from them when they could play mischief. The diet enquiry being the last of the supplementary enquiries was expected to have a smooth course. However, its coming last itself proved troublesome to a certain extent. By the time the diet enquiry was launched, the housewife had already been exposed to a lot of questioning and she was not prepared to answer any more questions.* It was only because of the medical and other kind of help the investigator had rendered to a number of families that her visit was tolerated. As a result of all these factors the number of diet schedules could not come up to the expected number as seen in Table No. 12.1 presenting the number of house-

TABLE No. 12.1.

Number of households selected and the number of households responding in the diet enquiry.

Name of the centre	Number of households selected	Number of households responding
Bori	71	63
Dhanore	69	51
Mirajgaon	80	47
Mithbtaon	113	95
Mudalgi	84	16
Nalwar	132	101
Total	549	378

holds selected in each centre for the diet enquiry and the number actually included in the final analysis. The small number of schedules in Mudalgi was on account of suspension of investigational work in that centre as a result of illness of the female investigator. From Table No. 12.1, it is obvious that if we leave aside Mudalgi 23 per cent of the selected households did not respond. In fact these were the households where persua-

*Note :—In one case the head of a household said "Now one day you should come to count the number of rats in our house. That activity will be quite useful from our point of view."

sion or any other method could not have worked. In the final analysis we had to deal with 373 households i.e. 68 per cent of the selected households. The 32 per cent households that were left out could no doubt form a peculiar category of which we knew little. This was likely to result in a bias in the surveyed households. Especially in the case of Mudalgi, where only 16 households were surveyed, it will be seen that the households showed a notably distinct level of nutrition. One possible explanation for this was that the diet of the families in Mudalgi in general was much better with better earnings referred to earlier. The other explanation was the possible bias in the sense that the investigator interviewed at the beginning those households that were not likely to refuse information and were of a particular category and then the investigator left due to her sudden illness.

Among the responding households, in certain cases the estimates of consumption of different items of food seemed unreliable. Whenever the accuracy of the information was doubted the information had to be discarded, sometimes discarding the whole schedule. Further, the quantity consumed especially in the case of leafy vegetables was almost invariably given in terms of money rather than in terms of weight. In case of fish the weights of quantities consumed were not available. Sometimes the value of fish was reported if it was bought. A number of families had however caught the fish for their own consumption and hence its weight as well as value could not be reported. This was specially found in Mithbaon where consumption of fish was reported in the majority of households.

In spite of the above difficulties, the data collected in the diet survey in the 6 centres did not fail to throw light on the structure of diets of the surveyed populations. The following is a description based on the average consumption of some of the important items of diet, in each of the 6 centres.

Table No. 12.2 gives the consumption in ounces, of the important items of daily diet, per adult equivalent, in each centre. The usual features of our dietaries, namely, the predominance of cereal diet and the virtual absence of protective foods is obvious from the table. In the following we have dealt with each of the important items separately.

Cereals :—The total average consumption of cereals per adult equivalent is given in Table No. 12.2 breaking it into main constituent cereals namely rice, wheat and millets. In all the 6 centres, the total average consumption of cereals exceeded the recommended* consumption of 14 ounces as it varied between 22 ounces in Bori to 28 ounces in Mudalgi. The consumption in Mudalgi, Dhanore and Mirajgaon was higher on the whole than that in the remaining 3 centres.

* This was recommended by the Nutrition Advisory Committee in 1944.

TABLE No. 12.2.

Consumption, in ounces, of various items of food per adult equivalent.

Item of food consumed	Centre surveyed					
	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
Rice	1.1	1.4	0.5	13.6	4.9	1.3
Wheat	2.0	1.2	0.9	—	1.9	0.3
Jowar, bajra or maize	15.2	21.4	21.9	8.4	20.9	21.2
<i>Total cereals</i>	<i>18.3</i>	<i>25.0</i>	<i>25.1</i>	<i>22.6</i>	<i>27.7</i>	<i>22.8</i>
Pulses	2.5	2.3	1.3	0.6	1.9	1.9
Leafy and other vegetables and other non-vegetarian food	1.4	1.4	0.9	0.4	4.3	0.6
Fish	—	—	—	3.0	—	—
Total consumption per adult equivalent (in ozs.)	22.2	28.7	27.3	26.6	33.9	25.3

Among the cereals millets that is jowar and bajra constituted the main food supplemented to a negligible extent by rice and wheat in all the centres except Mithbaon and Mudalgi. Families reporting consumption of wheat were rare in all the centres except Bori where 15 out of 63 surveyed families reported daily consumption of wheat. Rice in Mithbaon and maize in Mudalgi formed the main item of food.

In Table No. 12.3 are given the distributions of households in the surveyed centres according to the intake of cereals in ounces per adult equivalent. If we regard the consumption of less than 10 ounces too low and that above 36 ounces too high to be plausible, the average intake per adult equivalent for the remaining families has been presented in the table in the last row.

Pulses:—In pulses were included lentils like tur, greengram, bengal gram, etc. The average consumption of pulses was not satisfactory in any of the centres and was much below the recommended level of 3 ounces as seen from Table No. 12.2. Only in the case of Bori and Dhanore it was slightly above 2 ounces. In the remaining centres, it was often less than 2 ounces. It was quite low especially in Mithbaon. In Mithbaon, 53 out of 95 families reported no consumption of pulses. On the other hand Mithbaon being a fish consuming area, vegetables as well as pulses were often replaced by fish.

Vegetables and non-vegetarian food:—In Table No. 12.2 this category includes vegetables, fruit as well as leafy and all types of non-vegeta-

TABLE No. 12.3.

Frequency distribution of families in the surveyed centres according to total consumption of cereals per adult equivalent.

Consumption of cereals in ozs.	Number of families						All centres
	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar	
1—3	—	—	—	—	—	—	—
4—6	2	—	—	3	—	—	5
7—9	7	—	1	4	—	1	13
10—12	7	1	1	12	—	2	23
13—15	4	2	3	4	—	7	20
16—18	13	8	3	9	1	13	47
19—21	8	8	7	9	2	22	56
22—24	7	6	10	9	2	7	41
25—27	6	4	8	9	4	15	46
28—30	4	7	4	7	—	18	40
31—33	1	4	—	2	1	4	12
34—36	1	5	2	8	—	6	22
37—39	—	2	2	1	1	1	7
40—42	—	1	1	3	1	1	7
43—45	—	—	2	1	—	2	5
46—48	1	—	1	2	—	—	4
49—51	—	—	—	—	—	—	—
52—54	—	—	—	1	—	—	1
55 and over	—	—	—	—	3	—	3
Data not available	2	3	2	11	1	2	21
TOTAL	63	51	47	95	16	101	373
Average intake excluding extreme cases	19.9	24.1	22.8	21.9	23.9	23.3	22.5

rian food except fish. The reason for combining these items is that in most of the surveyed families, the consumption of one was substituted for the consumption of the other and very rarely were both the items included in the same meal. For instance on the day of survey only 4 per cent families had consumed both vegetables and non-vegetarian food. As seen from Table No. 12.4, the percentage of the surveyed families that were reportedly non-vegetarian was high in all the centres except Mudalgi and Bori. Still the percentage of families reporting consumption of non-vegetarian food but not of vegetables was 11 as seen from Table No. 12.5.

TABLE No. 12.4.

Percentage of families in the surveyed centres that were reportedly non-vegetarian.

	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar	Total
Number of families surveyed	63	51	47	95	16	101	373
Percentage of non-veg. families	49.2	96.1	66.0	95.8	12.5	72.0	73.0

This table indicates that the percentage of families reporting consumption neither of vegetables nor of non-vegetarian food was 48 i.e. half of the surveyed families had their food only of cereals and perhaps to a small extent of pulses. There were about 35 per cent families who reported consumption of fruit or leafy vegetables. Among the 35 per cent who consumed vegetables, the proportion of those who consumed leafy vegetables to those consuming fruit vegetables was 2:3.

As for the intake of vegetables in the 5 centres, it was extremely low. It did not exceed even one ounce in Mithbaon, Mirajgaon and Nalwar and was only a little more than an ounce in the other centres excepting Mudalgi where it was 4 ounces. The total consumption of this item of food was considerably below the recommended level of 10 ounces.

Non-vegetarian food was rarely consumed in the surveyed areas. It being costly villagers could not afford to consume it except on rare occasions or when some cheap river fish was available. In Table No. 12.5 figures for Mithbaon are not presented because estimates of fish consumed by the families there were not available. 70 per cent of the families reported consumption of fish, but the fish consumed was of a quality fit for being used as manure. Better quality of fish was sold out. A rough estimate of consumption of fish was reported to be a pound a day per consumer family, which meant a consumption of 3 ounces per adult equivalent among consumer and non-consumer families.

The average consumption per adult equivalent of a number of items like milk, sweet oil, ghee, sugar, jaggery, fruits etc. was not included in Table No. 12.2 because their daily consumption was totally absent in a number of households in almost all the centres. Those families that reported their consumption also consumed very small quantities as would be clear from the data presented subsequently. In fact, their consumption per family has been given in the table rather than consumption per adult equivalent. In the following are given the details regarding consumption of each of the above items.

TABLE No. 12.5.

*Families consuming vegetables and non-vegetarian food in the surveyed centres other than Mithbaon.**

Name of the centre	Number of families surveyed	Families consuming leafy vegetables	Families consuming fruit vegetables	Families consuming both leafy & other vegetables	Families consuming non-vegetarian food	Families consuming neither vegetables nor non-vegetarian food	Families consuming both vegetables & non-vegetarian food
Bori	68	4	16	1	5	36	1
Dhanore	51	8	10	—	13	18	7
Mirajgaon	47	4	12	8	8	25	—
Mudalgi	16	—	9	1	1	5	—
Nalwar	101	25	12	—	10	50	4
Total	278	36	59	5	32	134	12

* Mithbaon is dropped for reasons given in the report.

TABLE No. 12.6.
Consumption of milk per family in the surveyed centres.

Centre	Number of families surveyed	Families with daily consumption		Families with weekly consumption		Average daily consumption for consumer families in ounces	Average daily consumption for all the families in ounces
		No.	Percentage	No.	Percentage		
Bori	68	50	79.4	2	3.1	20.2	16.0
Dhanore	51	20	39.2	20	39.2	10.4	4.0
Mirajgaon	47	49	91.5	1	2.1	21.2	19.4
Mithbaon	95	70	73.7	2	2.6	8.6	6.4
Mudalgi	16	16	100.0	—	—	28.4	28.4
Nalwar	101	42	41.6	10	9.9	19.8	8.2
Total	373	241	64.6	35	74.0	16.7	12.3

Milk:—Except for Mudalgi, where all the families reported daily consumption of milk, the number of families not reporting any consumption of milk was quite large in almost all the remaining centres. It was specially so in Dhanore and Nalwar where nearabout 60 per cent families reported no daily consumption of milk. In Mirajgaon only about 9 per cent families did not report any daily consumption of milk. The relevant data are presented in Table No. 12.6. The average daily consumption of milk per family was uniformly low. It was the highest in Mudalgi being about 28 ounces per family. Next came Mirajgaon with the consumption of 19 ounces per family. In the remaining centres, it varied between 4 ounces per family in Dhanore to 16 ounces per family in Bori. The recommended consumption of milk per adult equivalent is 10 ounces.

It is seen from Table No. 12.7 that half of the families in Bori, Mirajgaon and very often more than 3/4th of the families in the rest of the centres reported no daily consumption of milk for drinking purposes either by children or by adults. As seen from the table relatively larger proportion of families consumed milk for tea for adults than for children. Even in the case of families reporting consumption of milk by children the average intake was low as judged from Table No. 12.6 wherein is presented the average consumption of milk by consumer families. Those families that owned milch cattle consumed milk though even in their case,

TABLE No. 12.7.

Families in the surveyed area consuming milk for drinking purposes or for tea.

	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
<i>Milk for drinking</i>						
Families reporting no daily consumption	33	45	22	83	11	91
Families reporting daily consumption	28	5	21	7	5	10
Families not giving information regarding consumption	2	1	4	5	—	—
<i>Milk for tea</i>						
Families reporting daily consumption less than 1 chattak	9	2	—	14	5	—
Families reporting daily consumption more than 1 chattak	40	17	33	42	11	37
Families reporting occasional consumption	1	—	3	—	—	3

a larger part was sold out. In the case of other families, milk worth 2 pice to 2 annas, which could be just enough for tea, was bought. Milk was not cheaper in these rural areas than in the towns nearby, thus costing 8 to 10 annas a seer.

Ghee and butter:—The intake of ghee and butter was absent in the daily diet in more than 90 per cent families, in all the centres excepting Mudālgi where 8 out of 15 families reported its daily consumption. The average consumption per family consequently came to less than an ounce in all the centres. The use of hydrogenated oil or vanaspati was almost unknown in the villages where more than 85 per cent families reported no daily consumption of the same. It was only in Mirajgaon that a few families reported consumption of Vanaspati which was more popular in the urban areas. The consumption was extremely low to deserve any mention. The relevant data regarding the consumption of ghee and butter are presented in Table No. 12.8.

Sweet oil:—This usually comprised sesamum oil or kardai oil. This item perhaps formed an important source of fat in the diet of the surveyed population. Majority of families reported daily consumption of oil in all the centres. It was only in Mirajgaon that about one-third of the families did not report daily consumption. The average daily consumption per family was the highest i.e. 4 ounces in Dhanore. In the rest of the centres, it varied between 1.2 to 2.4 ounces per family. The relevant data are presented in Table No. 12.9.

Sugar and jaggery:—Consumption of sugar was not very common in the surveyed rural areas, especially in Dhanore, Nalwar and Mithbaon, where more than 60 per cent families reported no daily consumption of sugar. In Bori and Mudalgi about 25 per cent of the families did not need sugar daily. It was only in Mirajgaon that daily consumption of sugar was reported by majority. Usually in rural areas sugar was uncommon and jaggery also was consumed only on festival days. The consumption of sugar in Mirajgaon and Mudalgi was 6 ounces and 5 ounces respectively, per family, but in the other centres it was only between 1 to 3 ounces, as seen from Table No. 12.10.

All families in Mudalgi and about 85 per cent families in Mithbaon reported daily consumption of jaggery. In the rest of the centres it was rarely consumed. The average consumption per family was 7 ounces in Mudalgi and 4 ounces in Mithbaon. In the rest of the centres, it varied from less than an ounce in Dhanore and Nalwar to 1.5 ounces per family in Mirajgaon and Bori.

TABLE No. 12.8.

Consumption of ghee, butter or hydrogenated oil per family in the surveyed centres.

Centre	Number of families surveyed	Families reporting no daily consumption		Families reporting not even weekly consumption		Families consuming daily	Average daily consumption in chattaks	Average daily consumption for all the families in chattaks
		No.	Percentage	No.	Percentage			
Bori	63	57	90.5	50	79.4	8	2.5	0.2
Dhanore	51	49	96.1	47	92.2	2	2.5	0.1
Mirajgaon	47	45	95.7	28	59.6	2	1.5	0.1
Mithbaon	95	92	96.8	90	94.7	8	0.8	—
Mudalgi	16	9	56.2	6	37.5	7	0.8	0.4
Nalwar	101	88	87.1	64	63.4	18	1.7	0.2
Total	878	840	91.2	285	78.4	88	1.6	0.1

TABLE No. 12.9.

Consumption of sweet oil per family in the surveyed centres.

Centre	Number of families surveyed	Families reporting daily consumption		Families reporting not even weekly consumption		Average daily consumption for consuming families in chattaks	Average daily consumption for all the families in chattaks
		No.	Percentage	No.	Percentage		
Bori	63	59	93.8	2	3.1	1.1	1.0
Dhanore	51	51	100.0	—	—	2.0	2.0
Mirajgaon	47	30	66.7	—	—	1.8	1.1
Mithbaon	95	81	85.7	12	12.4	0.7	0.6
Mudalgi	16	14	87.5	2	12.5	1.0	0.9
Nalwar	101	91	90.1	4	4.0	0.9	0.8
Total	373	326	87.4	20	5.4	1.1	1.0

TABLE No. 12.10.
Consumption of sugar per family in the surveyed centres.

Centre	Number of families surveyed	Families reporting no daily consumption		Families reporting not even weekly consumption		Consumer families	Average daily consumption for consuming families in chattaks	Average daily consumption for all the families in chattaks
		No.	Percentage	No.	Percentage			
Bori	68	17	27.0	17	27.0	46	2.0	1.5
Dhanore	51	32	62.7	13	25.5	19	3.0	1.0
Mirajgaon	47	5	10.6	2	4.3	42	3.0	2.7
Mithbaon	95	54	56.8	54	56.8	41	2.3	1.0
Mudalgi	16	4	25.0	1	6.2	12	3.1	2.3
Nalwar	101	70	69.3	50	49.5	31	1.9	0.6
Total	373	182	48.8	137	36.7	191	2.4	1.2

Eggs and chicken:—Data regarding the consumption of eggs and chicken have been presented in Table No. 12.11. The percentage of families reporting daily consumption of eggs was less than 4 and the weekly consumption was reported by less than 7 per cent families. As for chicken no consumption was ever reported.

TABLE No. 12.11.

Consumption of eggs and chicken per family in the surveyed centres.

Centre	Number of families surveyed	Number reporting daily consumption		Number reporting weekly consumption	
		Eggs	Chicken	Eggs	Chicken
Bori	63	1	—	1	1
Dhanore	51	—	—	3	1
Mirajgaon	47	3	—	8	—
Mithbaon	95	8	—	10	6
Mudalgi	16	—	—	1	1
Nalwar	101	2	—	2	2
Total	373	14	—	25	11

Fruits:—Daily consumption of fruits was almost unknown in all the surveyed areas. There were cases of consumption of certain fruits which were plenty and cheap in certain seasons. In Mithbaon for instance some cheap varieties of mangoes were consumed but that was only in summer. In other centres rarely was any fruit consumed.

The above description brings out the diet pattern of the surveyed families. The description however could not be complete without referring broadly to the nutritive content of the diets. The quality of the data did not justify any finer calculation. Still to get some broad idea regarding the nutritive content of the diet, in the following we have estimated the calorific content and the proteinic content of the diets. The kinds of varieties consumed or the loss of nutrition due to cooking etc. were not taken into account in the calculations.

In Table No. 12.12 the calorific content as well as the proteinic content per unit of various items of food consumed have been given for reference.

In Table No. 12.13 the calorific content of the daily diet of cereals, pulses, vegetables and fish has been set out for all the centres surveyed. As seen from the table the calorific content of the diet per adult equivalent varied from about 2100 calories in Bori to 3000 calories in Mudalgi. On the whole Mudalgi and Dhanore had a higher number of calories per unit than the other centres.

TABLE No. 12.12.

**Calorific and proteinic content of various items of food.*

Items of food	Calorific value per ounce	Protein content in grammes per ounce
<i>Cereals</i>		
Rice	100	2.4
Wheat	98	3.4
Bajra	102	3.3
Jowar	101	3.0
Maize		
<i>Average</i>	<i>101.5</i>	<i>3.2</i>
<i>Pulses</i>		
Masur Dal	98	7.1
Tur dal	95	6.3
<i>Average</i>	<i>96.5</i>	<i>6.7</i>
<i>Leafy and other vegetables</i>		
Methi	19	1.4
Palak	9	0.5
Math	13	1.4
Brinjal	34	1.3
Onion	56	0.4
Potato	99	0.5
<i>Average</i>	<i>38.3</i>	<i>0.9</i>
Fish	26	5.7

* Source : "Health Bulletin No. 23" by Aykroyd (4th edition; 1951).

TABLE No. 12.13.

Calorific value of various items of food consumed per adult equivalent in the surveyed centres.

Item of food	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
Rice	110.0	141.0	50.0	1371.0	493.0	134.0
Wheat	193.1	118.6	87.2	4.9	189.1	31.4
Jowar or Bajra or Maize	1574.3	2167.0	2225.9	851.6	2118.3	2147.7
Pulses	238.4	215.2	128.4	68.5	185.3	181.4
Vegetables	53.6	53.6	34.5	15.3	164.7	23.0
Fish	—	—	—	78.0	—	—
Total	2169.4	2695.4	2526.0	2389.3	3150.4	2517.5

The proteinic content in the daily diet from cereals, pulses, vegetables and fish for the surveyed families has been given in Table No. 12.14. As seen from the table, the protein content of the diets in the various centres showed more or less the same trend as the calorific content. Mudalgi and Dhanore had more proteins in their diet than the other centres. Bori and Mithbaon stood low in the protein content of the diet.

TABLE No. 12.14.

Proteinic content in grammes per adult equivalent in the surveyed centres.

Items of food	Bori	Dhanore	Mirajgaon	Mithbaon	Mudalgi	Nalwar
Rice	2.6	3.4	1.2	32.9	11.8	3.2
Wheat	6.7	4.1	3.0	0.2	6.6	1.1
Jowar, Bajra or Maize	48.9	67.2	69.1	26.4	65.7	66.6
Pulses	16.5	14.9	8.9	4.8	12.9	12.6
Leafy vegetables	1.3	1.3	0.8	0.4	3.9	0.5
Fish	—	—	—	17.1	—	—
Total grammes	76.0	90.9	83.0	81.8	100.9	84.0

It has been estimated that an average male adult requires 82 grammes of protein per day. Compared to this requirement diets of all the centres except that of Bori have shown a favourable protein content. It is especially high in Mudalgi and Dhanore. This means that the average man's diet in the surveyed localities was not deficient in protein content. However this is not abnormal as seen from the discussion of proteinic content of Indian diets discussed e.g. in 'Nutrition in India' by Dr. V. N. Patwardhan.

An idea regarding the diet of the surveyed populations can be had from the above. We have described only the broad features of the diet. The vitamin content, fat content or the mineral content of the diet is not calculated. In the following we describe the starvation that was reported in the surveyed centres.

Cases of starvation chronic as well as seasonal were reported in almost all the centres. But in Mithbaon 43 out of 95 surveyed families reported chronic starvation and 6 families reported seasonal starvation, their period of starvation varying between 1 to 9 months in an year. There were 13 families that reported starvation in spite of having reported a consumption per adult equivalent of 21 ounces or more per day. This may be because of the predominance of rice in the diet in Mithbaon with its low sustaining power which necessitated consumption of larger quantities.

In considering the cases of starvation, we had no definition of starvation. Those who reported to be starving were taken as starving. These reports were however verified otherwise. In Mithbaon where the starvation was common we separated the cases reporting starvation from others. There were 43 families starving among 95 families surveyed. Among the starving 25 per cent consumed less than 10 ounces of cereals, another 25 per cent consumed 10 to 19 ounces of cereals, and most of the cases consumed less than 27 ounces of cereals. Among the non-starving 25 per cent consumed 15 to 20 ounces, other 25 per cent consumed 20 to 26 ounces and the remaining 50 per cent consumed 26 to 40 ounces. In the following we give a few details regarding the starving families in Mithbaon.

Among the families surveyed in Mithbaon 54 had an annual income below 300 rupees. Out of these families, 32 reported chronic starvation. Starvation was common in the labour families of Mithbaon which had no stable source of income to rely upon. Thus in Mithbaon all the 5 cases of families depending on agricultural labour and 1 case of family depending on non-agricultural labour reported starvation. Starvation was also common among cultivators of land as out of 30 families of cultivators 17 reported chronic and 1 reported seasonal starvation. This could be taken as an obvious indication of the below-subsistence level of agriculture in Mithbaon.

Next to Mithbaon, Nalwar showed a large number of starving families. Out of a total of 101 families surveyed 13 reported chronic starvation and 30 reported seasonal starvation.

In Dhanore, 12 cases of seasonal and 2 cases of chronic starvation were reported. In this centre, out of 10 families depending on agricultural labour 8 reported starvation. In Bori only 3 cases of seasonal and 1 case of chronic starvation were reported, while in Mirajgaon and Mudalgi there was reported a single case of starvation in each.

Data collected regarding the change in diet shed light on the dull monotony of the diet pattern of the localities. The people ate bread in the morning, bread in the evening and bread for a change.

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