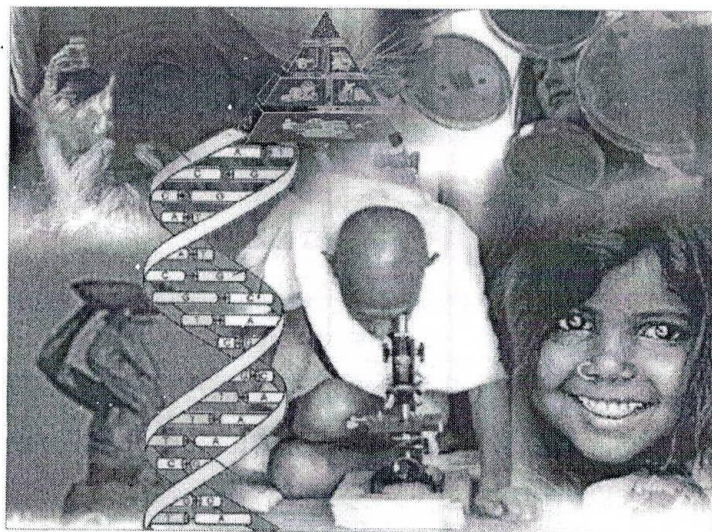


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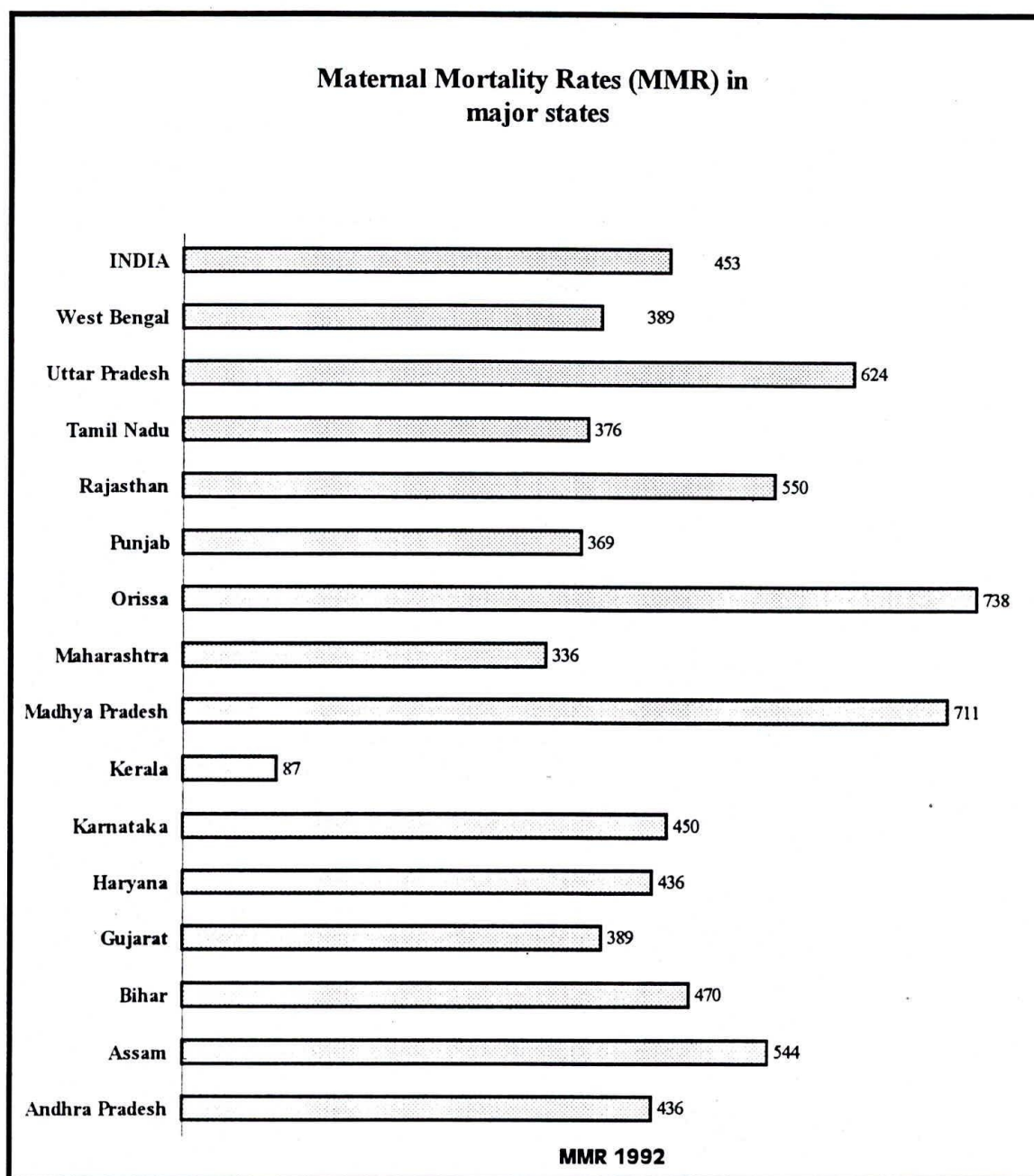
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Figure 1



Source : *The Progress of Indian States*, UNICEF, New Delhi, 1995.

Finally, we may place Karnataka on the all India scale in respect of the **life expectancy at birth** of its citizens (See Table 3). The International Conference on Population Development (ICPD) had resolved in 1994 to target a life expectancy of 70 by 2005 and of 75 by 2015. Against this, Karnataka has achieved a life expectancy at birth of 62 which is slightly higher than the national level of 60. Kerala, Maharashtra, Haryana, Tamilnadu and Punjab alone among the Indian states are ahead of Karnataka in this area.

HPM

The Interdisciplinary School of Health Sciences is one of the 44 departments of the University of Pune. The vision of late Prof P V Sukhatme (Padmabhushan), the School was established in 1989 through funding support from the University Grants Commission (UGC). The UGC was Chaired during that period by Dr Manmohan.Singh, current Prime Minister of **India**.

The School has now evolved into a premier teaching institution in the field of Health Sciences. The goal of the teaching programme is to train manpower, primarily students with an undergraduate degree in the biological, social or clinical sciences to work in the field of public health.

The curriculum has a unique interdisciplinary approach, with an emphasis on learning through extensive field work.

The School offers two Masters degrees :

- Master of Public Health(MPH) leading to a public health and epidemiology specialization and
- Master of Health Sciences leading to specialization in biological sciences related to health and disease, with primary teaching focus on human molecular genetics, recombinant DNA technologies and their applications to human disease diagnostics, vaccines, genomics of infectious agents etc.

With many shared courses, the objective of the Health Sciences curriculum is to ensure that students from a biological sciences background and with laboratory skills in microbiology, biochemistry, genetics and molecular biology have sufficient community exposure and are aware of the diseases of public health importance and of the public health priorities of the country, whilst public health students from non-biological disciplines are made aware of the recent technological advances in bio-medical sciences

Regional disparities in human development

There were serious regional disparities in the levels of human development of the Kannada speaking people due to their dispersion in different political units, each of which had its own priorities and policies. Developmental imbalances within the new state of Karnataka are a part of its historical legacy. The new areas added to the princely state of Mysore in 1956 were at different levels in most areas of economic and social development. Before independence, old Mysore enjoyed the reputation of being one of the most progressive regions of the country. A modern system of education was established in Mysore as early as in 1833. As a result, before independence, when only 16.6% of the country's population was literate, 20.3% of the people of old Mysore came within this category.

In Bombay Karnataka, a modern system of education was established in Belgaum as early as 1826 and Kannada schools set up after 1836. By contrast, Hyderabad Karnataka did not have a degree college in the district capital before the merger with old Mysore.

Basic health services were also a priority of the princely state of Mysore. In 1806, it was *perhaps the first state in the country to take up vaccination against small pox*. A government hospital was set up in Bangalore in 1846 and the first public health unit opened in Mandya in 1929. The state had established Public health centres as the principal units for basic health care and undertaken extensive measures to control communicable diseases like malaria well before independence. *The government of Mysore in 1930 set up the first two birth control clinics in the world*. In the other two regions, however, progress in social services-health, drinking water and roads-before reorganisation was not encouraging. Connectivity between headquarters towns of districts and taluks was very poor in Hyderabad Karnataka region before the merger.

Significant divergence in the availability of social infrastructure in different regions was not the only major problem facing the new state of Mysore. The overall levels of literacy and health had also to be substantially raised for the entire population. In 1956-57, the state had an enrolment ratio in primary schools of only 36.5%. *Per capita expenditure on education was around Rs. 5 and that on medical services around 76 paise!*

The condition of women in terms of marriage practices, inheritance rights and social status continue to be a matter of concern in all regions of the state. Low age at marriage for women, high female mortality rates, poor levels of female literacy and high dropout rates among girls still characterise Karnataka.

Karnataka and India

A bird's eye view of where Karnataka stands today as far as **human development** is concerned within the country as a whole is given below. *A look at four indicators should give us an idea of how far Karnataka has gone in providing basic health facilities to its people. These are the gender ratio, the infant mortality rate, the maternal mortality rate and life expectancy at birth.*

As far as the **gender ratio** is concerned only Kerala has come close to the levels attained in developed countries (See Table 2). In other states, the gender ratio (that is the number of women per thousand men) is still adverse due to prevalent social and cultural factors. In Karnataka, there are only 960 women for every 1000 men according to the 1991 census. This is worse than the position in Kerala, Andhra Pradesh, Orissa and Tamilnadu. It is also disturbing to note that the gender ratio has worsened between 1981 and 1991 in Karnataka

Centre of Social Medicine and Community Health

Faculty Profile | Program of Study

The **Centre of Social Medicine and Community Health (CSMCH)** is one of the eight Centres of the School of Social Sciences. These Centres were conceptualised by eight Special Committees that outlined the academic challenges that needed to be addressed by the Centres of JNU. The Special Committee of the Centre of Social Medicine and Community Health, which visualised the objective and the scope of the Centre, recognised the critical need of both delineating a field of enquiry in the discipline and generating a data base for public health in India. It emphasised these needs and placed them high on the Centre's agenda along with the task of training both social scientists and physicians of academically applying them selves to the huge tasks of public health in the country.

The recognition that the discipline of Preventive and Social Medicine needed to be strengthened was the major impetus for establishing the Centre of Social Medicine and Community Health in the Jawaharlal Nehru University. The Centre was set up outside the confines of a medical college so that it could enrich itself through wider interaction with the various disciplines of natural and social sciences.

Over the past 25 years, the Centre has acquired the rich experience of evolving problem-oriented interdisciplinary academic programmes in addition to building an active research base. At the same time, efforts have also been made at constructing institutional links with policy making.

Under the overall objective of creating academic programmes for making health services meaningful to the people of the country, the CSMCH set out its objective to understand the health problems and health needs of the Indian people with a view to find workable solutions for them in the existing social structure and to examine the social structure itself to delineate the structural constraints which limit the scope of health interventions.

The task obviously requires an inter-disciplinary approach involving disciplines such as sociology, anthropology, psychology, economics, history, politics, demography, statistics and public administration, apart from the disciplines that are traditionally included in public health. It was for this reason that the Centre was located in the School of Social Sciences.

Thrust Areas and Perspective plans

The Centre is poised to take up new challenges in the late nineties as public health has emerged as an important area of research at the national and international level. The following are the thrust areas of the Centre:

- Health service systems research;
- Epidemiology of diseases with special reference to communicable diseases, their resurgence and new epidemics;
- Quantitative epidemiology;
- Nutrition and health with a special focus on the vulnerable;
- Population policies;
- Environment and health including worker's health;
- Medical sociology, medical anthropology and health economics;
- Political economy of health;

- Nearly a quarter of all mothers did not receive a single dose of **tetanus toxoid**; three-fourths of births were to mothers who had received **iron and folic acid tablets**.
- While knowledge about **contraception** is nearly universal, this remains mostly limited to female sterilization, with 41% of currently married women being sterilized.

Table 6

HDI ranking of top 5 and bottom 5 districts of Karnataka at the global level		
District	Within State	Global level
Kodagu	1 (0.630)	104
Bangalore Urban	2 (0.601)	110
Dakshina Kannad	3 (0.592)	111
Uttara Kannada	4 (0.533)	123
Chikmagalur	5 (0.524)	124
Mysore	16 (0.440)	133
Bellary	17 (0.429)	135
Bidar	18 (0.419)	138
Gulbarga	19 (0.412)	139
Raichur	20 (0.399)	142
STATE	(0.470)	131
INDIA	(0.439)	134

N.B. : Figures in parentheses relate to HDI values

Table 7

Gender-related Health Index	
District	GHI 1991
Bangalore Urban	0.696
Bangalore Rural	0.619
Belgaum	0.610
Bellary	0.484
Bidar	0.523
Bijapur	0.523
Chikmagalur	0.626
Chitradurga	0.613
Dakshina Kannada	0.807
Dharwad	0.546
Gulbarga	0.530
Hassan	0.596
Kodagu	0.718
Kolar	0.588
Mandya	0.545
Mysore	0.569
Raichur	0.536
Shimoga	0.553
Tumkur	0.567
Uttar Kannada	0.677
STATE	0.546

- The survey also showed that while vaccination of children is fairly good for BCG, DPT and polio, *measles coverage continues to be low*. With measles **immunization coverage** at 67.3%, a tremendous effort is required, to increase the overall coverage.
- **Childhood diarrhoea** is another area of concern; nearly 60% of children with diarrhoea are not given ORS, nor the recommended home solution, nor even increased fluids.

While the **prevalence of leprosy** has declined considerably in the last few years from 4.08 in 1985-86 to 0.36 in 1996-97, **HIV** is emerging as a public health problem, with several dimensions which are not yet full understood. Official surveillance centres have detected 3265 HIV positive cases and 120 **AIDS** cases. There have been 163 deaths due to AIDS. Apart from the fact that existing data does not really capture the full dimensions of the AIDS and HIV issue, other aspects of surveillance, counseling, etc. also need **attention**.

- Demographic history

The new areas that we need to initiate work in are:

Democratisation and decentralisation as alternative strategies for the delivery of health care;

Non-health service inputs into health;

Urban health;

Health legislation;

Bio-ethics;

Indigenous systems and primary health care;

International trade, legislation and health;

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Academic Programmes

MCH Programme of Study

Physicians and nurses are offered admission to the Master of Community Health which is a pre-Ph. D. programme. The student is required to complete and acquire a cumulative grade A- (FGPA6.5) in the MCH programme before he/ she is admitted to the Ph. D. programme.

Eligibility for the Programme

For admission to the MCH programme, the minimum requirement is a good MBBS degree or M. Sc. in Nursing and one year experience in community health. The procedure for receiving applications, screening and selection of candidates are laid down by the University.

Duration of the Programme and Credit Distribution

The Master of Community Health Programme is spread over 18 months, spanning three academic semesters, including summer and winter vacations. While the students work for their course during the semester, the inter-semester vacations are utilised for field work. In this programme, a student has to earn a total of 36 credits. Of these, 9 credits are allocated to field-work and 27 credits are allocated to course work. There are two types of courses- core courses and optional **courses**.

The credit distribution is as follows:

Core Courses: 14 credits

Optional Courses: 13 credits

Assessment of Students and Grade System:

The Assessment of a student is based on the students term papers, and end-semester written examination and a viva-voce examination.

Course Outlines

The objective of the course structure of the MCH programme of studies is to expose the students to the core areas in the field of Community Health and then allow them to venture out into specific areas in greater depth by selecting optional courses.

Crude Death Rate

The SRS estimate of the **Crude Death Rate (CDR)** in Karnataka for 1996 was 7.6 per 1000 population; again, it was higher – 8.6 – in rural areas and lower – 5.4 – in urban areas. Decline in the CDR has been rather slow – 12.5 in 1975, above 10 but below 11 between 1980 and 1984 and ranging between 9.8 and 8.8 between 1985 and 1994. the CDR by district has been estimated only for 1991 when it was 8.5 in the state; varying, nevertheless, from 7 in Dakshina Kannada and Shimoga districts to 105 in Gulbarga. It was 10.5 in Bidar, 10.4 in Bijapur and 10.3 in Dharwad.

Crude Birth Rate

The SRS estimate of the **Crude Birth Rate (CBR)** in Karnataka in 1996, was 22.7 per 1000 people; it was 24.2 in rural areas and 20.3 in urban areas. The CBR in Karnataka has been fluctuating rather widely. It was 29.5 in 1975, 30.9 in 1984 and 1985, 30.1 in 1988 and 26 in 1994. According to the 1991 estimate, the CBR in Karnataka was 26.4; it ranged from 25.2 in Chikmagalur and Dakshina Kannada to 30 and above in Bijapur, Gulbarga, Bellary, Hassan and Raichur districts.

Maternal mortality rate

The **maternal mortality rate** of 450 per 100,000 live births in 1992 was still high when the national average was 453; Significantly, neighbouring Tamilnadu had a maternal mortality rate of 376 at the same time.

Gulbarga division, comprising the districts of Raichur, Gulbarga, Bidar and Bellary, along with Bijapur district of Belgaum division, tends to be the most backward in terms of demographic, social and health indicators. When the decadal population growth rate declined in all districts except Bidar, Bijapur, Gulbarga and Raichur in the eighties, the annual compound growth rates of these four districts increased from 1.99% in 1971-1981 to 2.25% in 1981-91, suggesting that decline in mortality has been more than the decline in fertility. Expectedly, the lowest **mean age at marriage** (17.7 in 1981) is in the districts of Gulbarga division, while Mysore division has both the highest mean age at marriage (20.4) as also the most favourable sex ratio (993); the sex ratio in Gulbarga division is 964. The HDI ranking of lowest 5 districts shows clearly that Gulbarga division is lagging behind the rest of the state (See Table 6) and the Gender Related Health Index also depicts the backwardness of this division (See Table 7).

- The National Family Health Survey (1992-93) showed that mothers received **antenatal care** in the case of 84% of the births in the four years preceding the survey, though mothers in rural areas were less likely to visit an allopathic doctor for antenatal care: but only 45% of the children born to non-literate mothers received antenatal care from allopathic doctor compared to 88% in the case of those who had completed middle school.
- While only 38% of live births were **delivered in health institutions**, one half of the deliveries were attended by doctors or nurses and midwives; 22% of births were delivered with the assistance of traditional birth attendants.

The course title, credit allocation and the broad content of the core courses and the optional courses are as follows:

Core Courses

Course No.	Title	Credits
SM 620	Comparative Studies in Health	2
SM 602	Epidemiology	3
SM 603	Health Services and the Community	2
SM 604	Research Methodology	2
SM 605	Review of Current Issues In Community Health	4

Optional Courses

Course No.	Title	Credits
SM 611	Population Problem and Family Planning Programme in India	3
SM 612	Communicable Diseases	3
SM 613	Nutrition and Maternal and Child Health	3
SM 614	Hospital Administration and Medical Care Services in India	2
SM 615	Vital Statistics and Health and Information System	2
SM 616	Health Manpower Planning in India	2
SM 617	Health Planning and Health Economics	2
SM 618	Community Health Nursing Education and Administration	3
SM 619	Rural Health Services Systems	2
SM 621	Operational Research and Systems Analysis in Community Health Research	2
SM 640	Workers Health in India	2

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Education Programmes for Social Scientists

M. Phil. In Social Sciences in Community Health

The education and Training programmes for social scientists have been evolved with the idea of making social scientists more effective members of a health team. The effort is to widen their social science perspective through the prescribed courses. Apart from strengthening the understanding of their basis disciplines, these courses underline the need for an integrated approach in the field of applied social sciences and offer the student an opportunity to understand the problems of community health. Students with a Master's degree in social sciences are eligible for admission to programme of study.

Eligibility for Admission

The procedure for receiving applications, screening and selection of candidates are being laid down by the University.

easily understood. Between 1951 and 1960, life expectancy at birth in Karnataka was 41 years for men and 39 years for women- two years greater for men than for women. Between 1971 and 1980, however, life expectancy for women surpassed that for men., it was 56 years for women and 55.5 years for men. In 1997, LEB was 66.3 years for women and 65.1 years for men, still below the ICPD goal of a life expectancy at birth greater than 70-years by 2005.

At the national level, life expectancy at birth was 41 years for men and 40 years for women between 1951 and 1960 and 51 years for men and 50 years for women between 1971 and 1980; it is expected to become 63 years for men and 64 years for women between 1996 and 2001. Comparing life expectancies for men and women in Karnataka with those for the country, it is clear that between 1951 and 1960, the LEB for men in Karnataka was aligned to the national rate; for women however it was greater by one year at the national level than in Karnataka. Between 1971 and 1980, life expectancy was greater by 4.5 years and 6 years for men and women respectively in Karnataka than for the country.

Comparing different districts in terms of life expectancy at birth, in 1981, it is seen that while life expectancy at birth in Karnataka was 57.71 years, the highest life expectancy of 65.53 years was in Dakshina Kannada district and the lowest of 57.09 years in Chitradurga, Dharwad and Gulbarga districts. Mandya and Shimoga districts had LEBs equivalent to the state average of 57.71 years. In 1981, life expectancy was higher than the average in 9 districts, lower in 8 districts and average in 2 districts.

In 1991, life expectancy at birth in Karnataka was 62.07 years; it was 60.6 years for men and 63.61 years for women. Thus, in 1991, not only was life expectancy higher for women than for men; the gap was also wider than before. Dakshina Kannada district registered the highest life expectancy of 68.82 years and Bellary the lowest of 60.32 years – a difference of 8.5 years. The highest life expectancy for men, 65.34 years, was in Dakshina Kannada district and the lowest, 57.12 years, in Bellary district. Life expectancy for men was lower than the state average in 9 out of 20 districts.

The highest life expectancy for women, 72.49 years, was in Dakshina Kannada district and the lowest, 63 years, in Tumkur district. The next highest is Kodagu district with a life expectancy of 71.87 years. Close to the lowest life expectancy in Tumkur district was Bellary with a life expectancy of 63.15 years. In all districts, without exception, life expectancies at birth were higher for women than for men but differences between life expectancies for men and women varied from one district to another. The difference in life expectancies for men and women was about 9 years in Kolar and Hassan districts and only 0.62 years in Bangalore (Urban) district.

Infant Mortality Rate

The Sample Registration Scheme has estimated the **Infant Mortality Rate (IMR)** in Karnataka as 53 per 1000 live births in 1997; but the estimates of 63 for rural areas and 24 for urban areas reveal the still large rural-urban difference which is typical of the country as a whole. *The urban IMR in Karnataka (24) in 1997 was lower than that in all states except Kerala where it was 15.* The country level IMR was 71; it was 77 in rural areas and 45 in urban areas.

In 1981, the IMR for the state was 81 but it varied widely from one district to another, ranging from 55 in Dakshina Kannada to 100 in Bijapur. In 1991, the IMR for the state was 74, down by 7 points from the 1981 level. At the district level, it ranged from 29 in Dakshina Kannada to 79 in Bellary.

Duration of the Course and Credit Distribution

The course work shall be completed within the first two consecutive semesters and the whole M. Phil programme (including dissertation) within the first four consecutive semesters.

The course work and dissertation together carry total of 24 credits . Distribution of credits for various courses is as follows:

1. Core Courses: 12 credits
2. Optional Course: 6 credits
3. Dissertation: 6 credits

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Table 4

Estimates of crude birth rate and crude death rate by district, 1991		
	CBR	CDR
Bangalore	26.2	7.6
Belgaum	27.3	8.0
Bellary	30.0	9.7
Bidar	29.9	10.5
Bijapur	30.1	10.4
Chikmagalur	25.2	8.4
Chitradurga	27.4	8.6
Dakshina Kannada	25.2	7.0
Dharwad	29.3	10.3
Gulbarga	30.1	10.7
Hassan	30.0	8.2
Kodagu	25.8	7.9
Kolar	28.0	8.6
Mandya	27.9	9.1
Mysore	26.6	8.8
Raichur	30.0	9.5
Shimoga	25.9	7.0
Tumkur	27.4	8.2
Uttar Kannada	26.4	8.5
KARNATAKA	26.4	8.5

Source : Estimates of Vital Rates for Districts of Karnataka 1951-91 by Dr. P.J. Bhattacharjee, Director, Population Centre, Government of Karnataka.

Life Expectancy at Birth

Life expectancy at birth (See Table 5) is the measure which is most often used and the most

Table 5

Life expectancy at birth in Karnataka by district, 1991			
District	Males	Females	Total
Bangalore Urban	65.48	66.10	65.78
Bangalore Rural	64.40	69.09	66.69
Belgaum	64.06	66.15	65.08
Bellary	57.12	63.15	60.32
Bidar	61.23	66.38	63.74
Bijapur	59.33	66.38	62.76
Chikmagalur	62.47	66.87	64.62
Chitradurga	59.49	64.47	61.92
Dakshina Kannada	65.34	72.49	68.82
Dharwad	60.13	65.56	62.78
Gulbarga	61.23	66.87	63.98
Hassan	61.02	70.00	65.40
Kodagu	64.41	71.87	68.04
Kolar	58.54	67.42	62.87
Mandya	60.12	68.03	63.97
Mysore	59.02	67.71	63.25
Raichur	61.76	69.53	65.55
Shimoga	59.33	65.00	62.09
Tumkur	58.39	63.00	60.64
Uttar Kannada	64.06	70.00	66.96

Source : Estimated by K.R. Narayana, Deputy Director, Census Operations, Bangalore