

**Health of Women in Kerala:
Current Status and Emerging Issues**

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Working Paper No. 23

January 2010



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N Ajith Kumar and D.Radha Devi*

ABSTRACT

This paper examines the health status of females in the state of Kerala, India. The state is ranked at the top in terms of human development index, social development index and gender development index among the states in India. The state is often described as a land of 'good health at low cost' and is reported to have the lowest rural-urban inequalities in public health status.

The paper attempts to travel along the life of Kerala women picking up elements that are relevant to a health study. For comparison, the national scenario is presented. Wherever possible, a comparison is made with men. The indicators considered in this paper can be broadly categorised as those reflecting the general health status, child health, reproductive health and health of the elderly. Some environment related variables have also been analysed. The paper also tries to identify data gaps and made use of narratives/anecdotal evidences to highlight problems. The paper finds that females in Kerala compare favourably against India in all conventional health indicators and that the problems related to women's health in Kerala are different from those addressed at the national level. Therefore, priorities, approaches and strategies set at the national level may not be appropriate for Kerala. The paper also calls for an in-depth examination of the health polices of the state to understand whether the state has been responding with gender sensitivity to the varying health care needs of women beyond and before the reproductive age. The state needs to work out strategies specific to particular groups of people who are vulnerable in terms of health and issues such as problems of old age of women and widows, over medicalisation, increasing cost of healthcare and occupational health of women.

Key Words: Health, Demography, Kerala, Reproductive Health, Ageing

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1. Introduction

Women's health in India has assumed importance only of late, particularly after the International Conference on Population and Development held at Cairo, Egypt in September 1994 and the Fourth World Conference on Women, held in Beijing in September 1995. Both these conferences placed immense importance on women's health, empowerment and reproductive rights. Not discounting the importance of health needs and health status of men, the fact remains that over a lifetime the health of women is usually worse than that of men. Moreover, certain health problems are more prevalent among women than among men and certain health problems are unique to women/affect women differently than men. Furthermore, some environmental problems have a disproportionate impact on women compared to their male counterparts.

Gender unequal relations are social creations and perpetuated through socialization. The difference between genders is more keenly felt in patriarchal societies like India where men are considered to be "superior" to women just because of their sex. Being inferior to men denote inferior status in every aspect of life, health included. At any given time, the health needs of men and women are different where women with their biologically and culturally assigned roles have more health care needs than men. To elaborate, biologically they bear the burden of reproduction. Women alone have to go through all the problems and discomforts related to pregnancy and delivery. Culturally, in India, women are expected to be subservient to the male members of the household and work for the latter's happiness and satisfaction. Further, society expects them to play a very important role in providing informal health care to all the members of the family. It is their responsibility to rear children on healthy lines, teach them health habits, prepare and select the family's food, and care for the young, the sick, the aged and the disabled.

Generally, the term woman is used to refer to a female of at least fifteen years of age. But, health of a woman, thus defined, is intertwined with her health related experiences in the early years of life. According to the *National Population Policy, 2000*, "The complex

socio-cultural determinants of women's health and nutrition have cumulative effects over a lifetime. Discriminatory childcare leads to malnutrition and impaired physical development of the girl child". It also said that nutrition in early adolescence is crucial to the woman's well being and through her, to the well being of children. Also in India, "social, cultural and economic factors continue to inhibit women from gaining adequate access to *even the existing* [italics added] public health facilities. This handicap does not just affect women as individuals; it also has an adverse impact on the health, general well-being and development of the entire family, particularly children".¹ This statement shows the inherent nature of the society which stand in the way of women getting adequate health care, the inadequacy of the available health care facilities and the importance of women's health in deciding the health of other members of the family, particularly children.

Provision of health in the Indian families generally is along the lines of sex, age, status and role in the family and women generally come at the end of the line. But India is a large country which harbours a thoroughly heterogeneous group of people in terms of religion, caste, language, ways of living, economic status, or levels of education. All these separate groups and their sub-groups have their own cultural values and norms which will have an impact on their attitude to life in general and health care in particular. Nevertheless, it is felt that women's position is more or less the same across the board with only degrees of differences.

2. Objective

This paper is an attempt to provide a profile of women's health in Kerala. Though a much studied subject, it has not lost its relevance even to-day as health problems of one nature or the other still disturb the society. Women face many health concerns but this paper will look into only selected aspects. An attempt is made to travel along the life of a woman picking up elements that are relevant to a health study. But no claim is made as to the completeness of the elements covered.

¹ Government of India, *National Health Policy 2002*, <http://www.mohfw.nic.in/np2002.htm> (accessed on 30 September 2009).

The health status of children will be looked into first, to the extent data permits, as childhood health will affect directly or indirectly, their subsequent health status. For comparison purposes, the overall health situation prevailing in the country will also be presented. Wherever data are not available, issues will be presented and discussed.

3. The Setting

Kerala is a small state located in the southwestern tip of Indian peninsula and came into existence in its present form in November 1956 when state boundaries were demarcated on the basis of language. However, for Kerala two of its boundaries by co-incidence are natural ones. On the Eastern side is the Western Ghats. From the Ghat, the land undulates to the west and is full of hills and valleys with many rivers and streams. The western boundary is the Arabian Sea. There are several lakes and backwaters in this narrow strip of land. These diverse physical characteristics of the state led to the natural classification of its 38863 sq. km into three regions: high land (the Ghat region), low land (western coastal region) and midland (the area between the high and the low land). Kerala has a hot and humid climate and the temperature ranges between 80 and 90 degree Fahrenheit.

Kerala accounts for a mere 1.18 percent of the total land of India. The state is divided into 14 districts. The total population of the state has increased from 16.9 million in 1961 to 31.8 million in 2001 (3.44% of total Indian population) with a rural component of 84.9 percent in 1961 and 74.0 percent in 2001. The population growth rate in Kerala during 1991-2001 was 9.42 percent, which was the lowest among the Indian states.² This is a very densely populated and highly literate state with 819 persons per sq. kilometre in 2001 and a female literacy rate of 87.9 percent and a male literacy rate of 94.2 percent.

The age structure of the population of Kerala in 2001 shows 26.0 percent children (0-14 years), 63.4 percent adults (15-59 years) and 10.6 percent elderly (60+ years). According to the projections made by the Technical Group on Population Projections constituted by

² The population growth rate in the state was higher than that of India till 1981. This rate showed a gradual increase for a long time and reached its peak during 1971-81, thereafter showing a continuous decline.

the *National Commission on Population*³, the distribution of population by 2026 for the corresponding age groups will be 18.8, 63.0, and 18.2 respectively. Note that in less than two decades one in every five persons will be aged at least 60 years, *leading to a new type of health problem* for the state to face. Among the aged a higher proportion will be females of which majority are likely to be widows. At the same time, the decline in the percentage share of children from 26 percent to 18.8 percent during the reference period should also be noted which would necessitate a re-thinking on state's spending pattern particularly in the health sector.

Kerala's development experience is known to be characterized by high level of social development disproportionate to the level of economic growth.⁴ In terms of all conventional physical quality of life indicators, Kerala is way ahead not only of other Indian states and middle income countries but also some of the developed countries. The state is also ranked top on the basis of human development index. The *India Social Development Report*⁵ ranked Kerala first in social development in the rural areas and second in the urban areas among the states in India. The state is often described as a land of 'good health at low cost'.⁶ The state is reported to have the lowest rural-urban inequalities in public health status.⁷

³ Census of India (2001), *Population Projections for India and States 2001-2026*, (revised, December 2006), Report of the Technical Group on Population Projections constituted by the National Commission on Population.

⁴ But, from the late eighties, the state has also been witnessing significant economic growth. As a result, the state's per capita income in 2006-07 is the fifth highest among the states in India. See Government of Kerala (2009), *Budget in Brief 2009-10*, Government of Kerala.

⁵ Council for Social Development (2008), *India Social Development Report 2008*, Oxford University Press, New Delhi.

⁶ The cost of treatment is the lowest in Kerala even now, both in rural and urban areas, compared to other states though it has increased significantly over the years. According to NSSO 60th Round conducted in 2004, the average medical and other related non-medical expenditure per treated person during 15 days preceding the survey was Rs. 182 in rural areas and Rs. 193 in urban areas of Kerala while the national averages were Rs. 257 in rural areas and Rs. 306 in urban areas. See NSSO (2006), *Morbidity, Health Care and the Condition of the Aged*. However, the maternal care is costlier in Kerala even according to this survey.

⁷ Government of India (2005), *Report of the National Commission on Macroeconomics and Health*, Ministry of Health & Family Welfare, Government of India.

The high status of women in Kerala has received international attention.⁸ The state is at the top among the states in India in gender development index. The literacy and education levels of women are comparable to that of men and are much higher than their counterparts elsewhere in India. Several reasons have been attributed to the high status of women in Kerala which include the long history of social reforms and the importance given to women by reformers, matrilineal systems followed by certain sections of the population, early spread of female education, early inception of family planning and the influence of the left movements.⁹ It is particularly interesting to understand the health status of women in a state where almost all girls below the age of 14 go to schools.

4. Health Facilities in Kerala

There is a fairly good distribution of health facilities in the public sector in Kerala. Three systems of medicine viz., allopathic, ayurvedic and homeopathic co-exist in Kerala. The facilities available for allopathic treatment in the public sector in Kerala in 2008 include 929 Primary Health Centres (PHCs), 114 Community Health Centres (CHCs), 136 hospitals (general hospitals, district hospitals and taluk hospitals), 59 dispensaries, 18 Tuberculosis clinics and 18 leprosy control clinics. In addition, there are 5094 sub-centres in the state. The facilities for in-patient care include a total of 36642 beds. Out of the total beds available in the allopathic institutions in the public sector, 23871 (65%) beds are in hospitals, 7675 (21%) are in primary health centres and 4730 (13%) are in community health centres and the remaining in other institutions. Apart from these institutions under the Director of Health Services, 8402 beds are available in the five government medical colleges under the Medical education department. The state also has 73 co-operative hospitals with 5826 beds in the allopathic stream. The infrastructure in the public sector available in other streams of medicine includes 117 ayurveda hospitals with 2764 beds and 747 ayurveda dispensaries. There are three government ayurveda medical colleges in the state. The infrastructure in the homeopathic stream includes 31

⁸ See for instance, Jean Dreze and Amartya Sen (1996) *Indian Development: Selected Regional Perspectives*, Oxford University Press and Lincoln C. Chen (2002) "In Pursuit of Health Equity: The Kerala-Global Connection", *Working Paper No.1*, Achutha Menon Centre for Health Studies, Thiruvananthapuram.

⁹ Swapna Mukhopadhyay (2007), "Understanding the Enigma of Women's Status in Kerala" in Swapna Mukhopadhyay (ed) *The Enigma of the Kerala Women*, Social Science Press, New Delhi.

homoeo hospitals with bed strength of 970 and 525 homoeo dispensaries. Besides, there are two homoeo medical colleges in the state.

The data given above provides only a part of the health facilities available in the state. The facilities in the private sector are higher than what is available in the public sector. According to a survey conducted by the Department of Economics & Statistics in 2004, there were 12467 private medical institutions in the state of which 1942 had in-patient facilities with total bed strength of 64491.¹⁰ Allopathic medical institutions constituted 37 percent (4825) of the private sector and ayurvedic institutions constituted another one third (4332). One-fourth of the private medical institutions in the state were in the Homoeopathic stream. The remaining 535 medical institutions were in other branches of medicine such as Unani, Sidha, Marma, Naturopathy, etc. But it was found that in-patient care in the private sector was largely in the allopathic stream as 90 percent of the beds were in the allopathic medical institutions.

The state has reported the highest proportion of hospitalized persons both in rural and urban areas. Share of public providers in non-hospitalized medical treatment of ailments in Kerala is higher than that of all India percentages (Kerala rural- 37%; Kerala urban- 22%; India rural- 2%; India urban- 19%). Also, there is a decreasing trend in the hospitalized treatment from public sources in Kerala.¹¹

5. An Examination of Available Data

Health has several dimensions¹². According to World Health Organization, health is not just the absence of disease or infirmity but is a state of complete physical, mental and social well being. *Defined thus, data on the health status of women in India are conspicuous by its absence.* There is no single "standard" measure of health status for any population. In this study available data, which is mostly on indicators of physical health, are used to document the trends in the health status of women. The data presented here offer only a

¹⁰ Government of Kerala (2004), *Report on Private Medical Institutions in Kerala*, Department of Economics & Statistics, Government of Kerala.

¹¹ NSSO (2006), *op.cit.*

¹² For different definitions of health, see James S. Larson (1991), *The Measurement of Health: Concepts and Indicators*, Greenwood Publishing Group Inc., Westport.

partial documentation of these trends. But it provides fairly good information on the current status in physical health, though past trends may not be captured for a uniform period for all the indicators. On some issues, in the absence of scientific data, various narratives/anecdotal evidences will be used to highlight the problem.

Sex ratio, life expectancy and crude death rates are taken to measure the general health situation. To this list is added infant mortality rate and indicators of nutritional status of children like weight, wasting, stunting and anaemia. In adulthood, age at marriage and reproductive health assumes importance. Specifically, pre-natal, natal and post-natal care, total fertility, contraceptive use and maternal mortality will be examined. Women's health beyond reproduction covers menopause and elder abuse. Because of the intrinsic relationship between women's health and home environment, aspects like domestic violence and dowry will be discussed. Under home environment also comes availability of safe drinking water, type of fuel used, and sanitation facility.

5.1. General

5.1.1. Sex Composition

In a study of health issues, the relative number of males and females in a given area is important as it has major impact on health status and health behaviour of the population. The question of ideal sex ratio is a matter of discussion. Traditionally, it is argued that ideal sex ratio should be skewed towards more females than males as women are physiologically equipped to live longer than men. Roughly 105 females per 100 males was considered acceptable. But with tremendous improvement in the field of health, other things remaining equal, death rate is found to be declining very fast consequent of which the modern thinking was modified in favour of equality, meaning 100 females per 100 males for the total population. However, for different age groups due to the differences in the risk of mortality, one is expected to find different sex ratios, generally with more males at the young age group¹³ to more females in the old age group.

In this paper three types of sex ratios will be examined: (i) sex ratio of the total

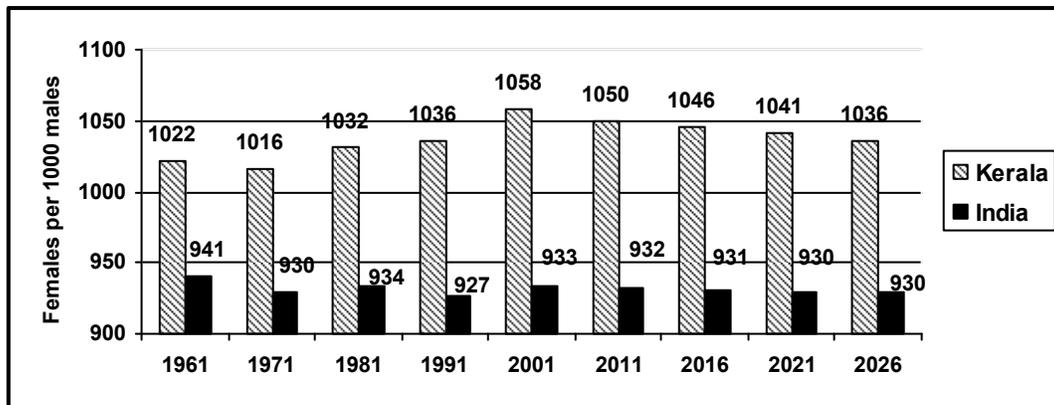
¹³ Worldwide, the normal sex ratio at birth is about 105 male babies per 100 female babies. See O.P. Sharma and Carl Haub, *Sex Ratio at Birth Begins to Improve in India*, Population Reference Bureau, www.prb.org/Articles/2008/indiasexratio.aspx (accessed on 17 September 2009).

population, (ii) sex ratio for the children aged 0-6 years and (iii) sex ratio for the three broad age groups of population viz. 0-14 (child), 15-59 (Adult) and 60 years and above (old). Sex ratio is defined as the number of females per 1000 males.

Kerala had 15.5 million males and 16.4 million females in 2001 giving a sex ratio of 1058 females per 1000 males. Since its formation in 1956, Kerala had more females than males as can be seen from the Figure 1 below. The availability of more females in the state could be due partially to the out migration of more males than females¹⁴ and/or the higher survival rate of females compared to males.

It suggests the availability of more females in the state than males or more females survive than males or a combination of both. However, according to the projections made by the experts, sex ratio will decline after 2001 and it will reach the 1991 situation of 1036 females per 1000 males by 2026.¹⁵ It implies an improvement in the mortality rate of males and/or perhaps a return migration of males to the state. In the case of India, sex ratio has always been below 1000 indicating more males than females. Both these situations, high sex ratio as in the case of Kerala or low sex ratio as in the case of India, are unacceptable.

Figure 1: Overall Sex Ratio in Kerala and India: 1961-2026



Source: Census of India for the period 1961-2001 and Census of India (2001), *Population Projections for India and States 2001-2026, op.cit for projections (2011-2026)*

¹⁴ Kerala is an out migrating state and the role of emigration of males more than that of females could explain a portion of the paucity of males in the state particularly in the working age group. See K.C. Zachariah, E.T.Mathew, S.Irudaya Rajan (2003), *Dynamics of Migration in Kerala: Dimensions, Differentials and Consequences*, Orient Blackswan, Hyderabad.

¹⁵ Census of India (2001), *Population Projections for India and States 2001-2026, op cit.*

The sex ratio for the 0-6 population has been declining both in Kerala and in India (Table 1) and the rate at which it has been declining is faster in India. In India a steep decline is noted since 1981 and one of the main reasons could be the entrance of ultra sound scanners during 1980s. This has helped in identifying the sex of the foetus and thereby, it is suspected, led to the elimination of female foetus. Nonetheless, this situation was not strong in Kerala as is the case with India.

Table 1: Sex Ratio among 0-6 Population

Year	Kerala	India
1961	972	976
1971	976	964
1981	970	962
1991	958	945
2001	963	927

Source: GoK (2003) http://www.kerala.gov.in/statistical/vitalstatistics/w_1.18.03.pdf (accessed on 12 October 2009)

This missing girl situation could probably be explained off by the fact that more boys are born than girls (104-107 boys for every 100 girls) in any given society¹⁶. This has led to the examination of the sex ratio for the broad age groups, which, unfortunately, underlines the disturbing feature found above. In Kerala, not only the child population aged 0-6 shows a larger number of males but even the 0-14 age group has the same pattern of sex ratio (See Table 2). When the 2001 data for Kerala was analyzed in detail, it was found that till age 14 the paucity of girls continued and that after age 14, the sex ratio do not come below 1000 in any age group, though in the 44-54 age group it is almost 1:1 before taking off favouring females (Figure 2). In India, on the other hand, except in the age group 60-69 a predominance of males was noted in all age groups.

Table 2: Sex Ratio for Broad Age Groups: 1991-2026

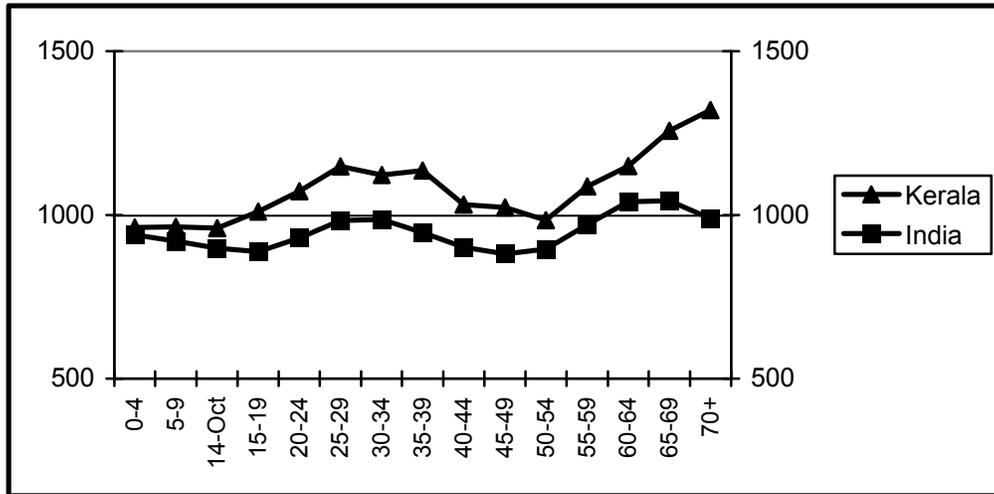
Year	Kerala			India		
	0-14	15-59	60+	0-14	15-59	60+
1991	969	1054	1155	931	925	930
2001	962	1070	1254	919	930	1029
2006	948	1064	1257	915	928	1051
2011	938	1060	1234	905	930	1046
2016	932	1052	1215	889	935	1032

¹⁶ Chahnazarian A (1988), "Determinants of the Sex Ratio at Birth: Review of Recent Literature", *Social Biology*, 35(3-4):214-35.

2021	931	1038	1213	888	931	1029
2026	931	1018	1228	888	925	1047

Source: Computed from various Censuses and projection by Technical group

Figure 2: Sex Ratio for Five Year Age Group in Kerala and India: 2001



Source: Census of India 2001

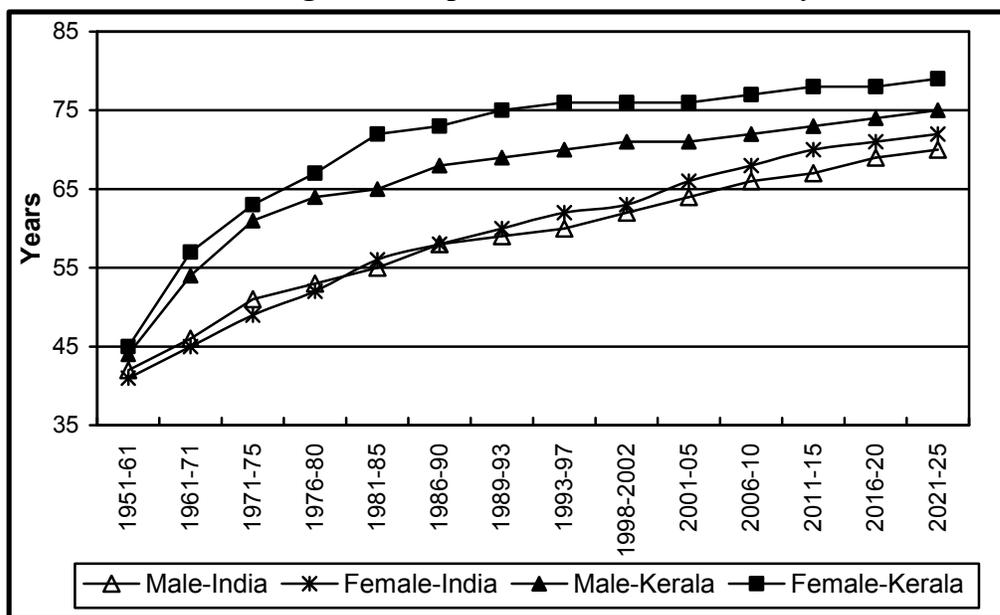
In sum, as far as sex ratio is concerned, what is observed from the data presented so far can never be accepted as a normal situation, neither in Kerala with 1058 females per 1000 males in 2001 nor in India with 933 females per 1000 males in 2001. But as far as this paper is concerned, since sex ratio is an indicator of health, women in Kerala are much healthier than their male counterparts as there are more women than men in the state. It also shows that there are more women in Kerala than men whose health needs are to be met.

5.1.2 Life Expectancy at Birth

A woman's physical well being is generally shown through records of mortality. And expectation of life at birth is one such measure which is based on age-specific mortality data. Since women are genetically programmed to have a comparatively lower mortality, life expectancy at birth should be high for women compared to that of men. Figure 3 shows that this expectation is true in the case of Kerala. The values given for years after 2001 are projected by the Expert Committee on population projections. It shows that in another 20 years, women in Kerala will be living on an average 79 years and men 75 years. Through

out Kerala's history the female life expectancy has been higher than that of males. This high life expectancy is seen as a great achievement in the field of health as it reflects improvement in public health, medical care and diet. If life expectancy at birth is any indication of health, Kerala women are, on average, much healthier than Indian women. However, this indicator does not take into account the quality of life. As people live longer, there has always been an increase in the number of years spent in poor health. While women live longer on average than men, they spend more years in poor health than men and thus the number of years needing geriatric care is also more.

Figure 3: Expectation of Life at Birth by Sex



Source: Census of India for the period 1961-2001 and Census of India (2001), *Population Projections for India and States 2001-2026, op.cit for projections (2011-2026)*

5.1.3 Crude Death Rate

Crude death rate shows the frequency of deaths in the population and thus the overall health status of a population. It also helps to estimate the extent of need for health services. Table 3 gives the crude death rate for males and females for a period of ten years from 1997 to 2007. Note that the crude death rate throughout the period is high for men compared to women; again indicating better health for women and a larger number

of women whose health needs should be catered to.

Table 3 Crude Death Rate by Sex

Year	Kerala		India	
	Male	Female	Male	Female
1997	7.6	4.9	9.2	8.6
1998	7.6	5.4	9.2	8.8
1999	7.5	5.4	9.0	8.3
2000	7.4	5.5	8.9	8.1
2003	7.2	5.5	8.4	7.5
2004	7.2	5.0	8.0	7.0
2006	7.5	5.9	8.0	7.0
2007	7.8	5.9	8.0	6.9

Source: SRS Bulletin, Various Issues

5.1.4 Infant Mortality Rate

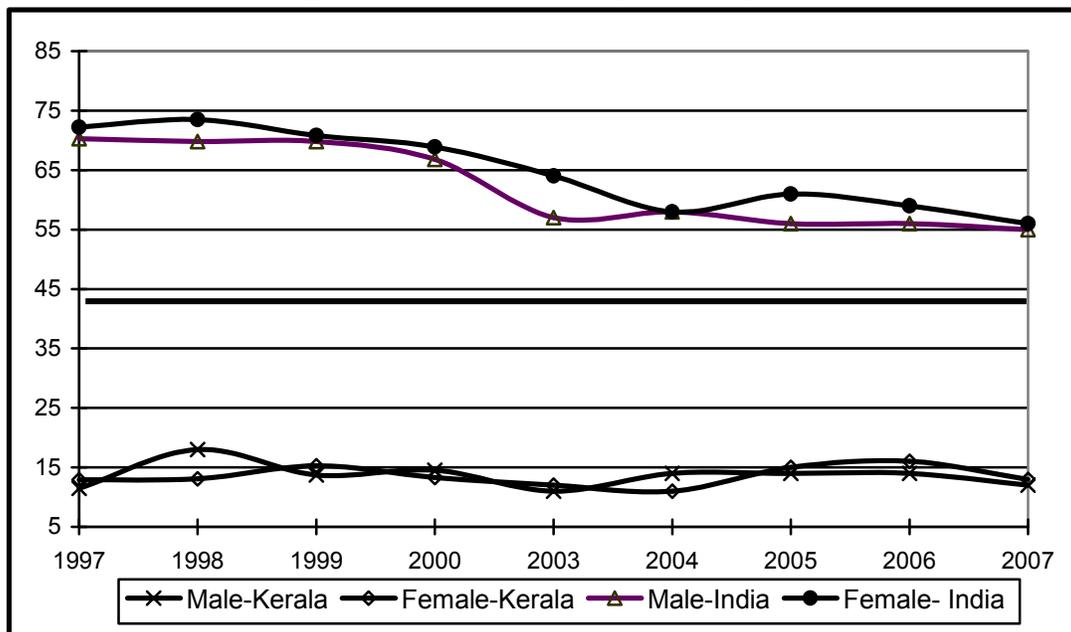
Infant mortality rate (IMR), the number of deaths to children under one year of age per 1,000 live births, is considered as the single best indicator of health as it is very sensitive to the factors of accessibility and quality of health care besides being associated with education and economic development. In the words of Dr. Bir Singh, IMR “reflects the general standard of living of the people and effectiveness of interventions of improving maternal and child health in a country. Compared to other indicators like crude birth rate, maternal mortality rate and under five mortality rate etc. this indicator has always been accorded greater importance by the public health specialists because infant mortality is the single largest category of mortality. Moreover deaths during infancy are due to a particular mix of diseases and conditions to which the adult population is less exposed and less vulnerable. Changes in specific health interventions affect IMR more rapidly and directly and hence it may change more dramatically than the crude death rate in a population”¹⁷. It also is an indicator of effectiveness of health services.¹⁸ It is said that “India is a country where social disadvantage outweighs natural biological advantage of being a girl. A whole range of discriminatory practices including female foeticide, female

¹⁷ Bir Singh (2007), “Infant Mortality Rate in India: Still a Long Way to Go”, *Indian Journal of Pediatrics*, Commentary, Vol. 74, May: 454.

¹⁸ Hussain Abu Srair, Joshua A. Owa, and Hussain Ahmed Aman, “Cause-Specific Infant Mortality Rate in Qatif Area, Eastern Province, Saudi Arabia, www.kfshrc.edu.sa/annals/articles/152/94101.rtf (accessed on 9 September 2009).

infanticide, female genital mutilation, son idolization, early marriage and dowry have buried the future of the nation. In India, discriminatory practices have greatly influenced the health and well-being of a girl child, resulting in a higher mortality rate”.¹⁹ The probability of death is very high in the first year of life compared to other age groups of children or adults. Hence it is always analysed separately. The IMR given in Figure 4 for 1997 to 2007 shows that throughout the period, the IMR in Kerala was below 20 and that of India never came below 55. The decline in IMR in Kerala was rather fast as the female IMR in 1981 was 48 (male =55)²⁰ and the corresponding rate in 1991 was 38 (male = 36).²¹

Figure 4: Infant Mortality Rates by Sex



Source: SRS Bulletin, Various Issues

The female IMR in India was invariably higher than that of males except in 2004 when it was the same for both sexes. The sex-wise differences were not marked in the case of

¹⁹ “Girl child: Future of India”, www.indianchild.com/girlchild/future-of-india.htm (accessed on 9 November 2009)

²⁰ K C Zachariah, S Irudaya Rajan, P S Sarma, K Navaneetham, P S Gopinathan Nair & U S Mishra (1998), *Demographic Transition in Kerala in the Eighties*, Centre for Development Studies, Thiruvananthapuram.

²¹ S. Irudaya Rajan, K. C. Zachariah (1997), “Long Term Implications of Low Fertility in Kerala”, *Working Paper No.282*, Centre for Development Studies, Thiruvananthapuram.

Kerala except perhaps in 1998 and 2004 when the male IMR was high compared to the female IMR. A word of caution is required here in interpreting the small differences in IMR between males and females as it requires a large number of infant deaths for calculation and infant deaths in Kerala are comparatively low. The thick line in Figure 4 is for IMR of 30, the goal set by the National Population Policy 2000 to be achieved by 2010.

5.1.5 Indicators of Nutritional Deficiency

Child growth is the most widely used indicator of nutritional status in a community and is internationally recognized as an important public-health indicator for monitoring health in populations. In addition, children who suffer from growth retardation as a result of poor diets and/or recurrent infections tend to have a greater risk of suffering illness and death.²² Nutritional status of children is reflected in three generally used indices²³: (i) **wasting** defined as an abnormally low weight for the child's height (ii) **stunting**, a situation where the children are too short for their age (an indicator of chronic malnutrition) and (iii) **under weight** which is low weight for their age due mainly to inadequate diet and infection.

Anaemia is yet another important index of diet related problems. It is a condition where the number of red blood cells in the blood is below 'normal' for age and sex of the individual. Iron deficiency is the root cause of anaemia with kids and teenage girls. Usually women after conceiving a child suffer from iron deficiency which will eventually lead to anaemia. When a person turns anaemic, her/his body tissues get lesser amount of oxygen, the result of which is fatigue, lethargy and many other medical complications in due course of time.

Some information on nutritional deficiency was collected by the National Family Health Survey (NFHS) and the information presented in Table 4 is from the third such survey conducted during 2005-06 (NFHS-3).

²² WHO, www.who.int/healthinfo/statistics/indchildrenstunted/en/index.html (accessed on 1 November 2009)

²³ Margaret D. Simko, Catherine Cowell, Judith A. Gilbride (1995), *Nutrition Assessment: A Comprehensive Guide for Planning Intervention*, Edition: 2, Jones & Bartlett Publishers.

Table 4: Percent of Undernourished and Anaemic Children (<5 yrs)

Category	Kerala		India	
	Male	Female	Male	Female
<i>Indicators of Undernourishment</i>				
Underweight (low weight for age)	24.0	21.8	41.9	43.1
Severely underweight	5.0	4.3	15.3	16.4
Stunted (low height for age)	25.8	23.1	48.1	48.0
Severely stunted	6.9	6.1	23.9	23.4
Wasted (low weight for height)	16.3	15.5	20.5	19.1
Severely wasted	4.6	3.6	6.8	6.1
<i>Anaemic</i>	44.6	44.5	69.0	69.9

Source: NFHS – 3

The data presented shows that the male-female difference is negligible not only for Kerala but also for India though the percentages are higher in the latter than in the former case. However, even the small differences noted in Kerala are favouring females.

5.1.6 Age at Marriage and Reproductive Health

Another important factor that affects the health of a woman is the age at which she gets married. “In demography age at marriage occupies a predominant place as one of the proximate determinants of fertility and any respectable discussion of fertility trends or determinants refers to the level of age at marriage, at least for women”.²⁴ It is also said that postponement of marriage will make both girls and boys mature mentally and emotionally. Marriage heralds the beginning of a new family unit with all the complicated roles and statuses, which the members of this unit are expected to play. In India, production of a child (preferably a son) as early as possible, after marriage, is the rule rather than the exception even today. Hence, the age at which a girl gets married and thereby assumes the responsibilities of home and reproduction assumes importance in a study of women’s health. The National Population Policy (2000) states that the percentage of girls marrying below 18 years (the legal minimum age at marriage for girls) in this country should be brought to nil by 2010 and that the marriages should take place “preferably only after attaining 20 years of age”.

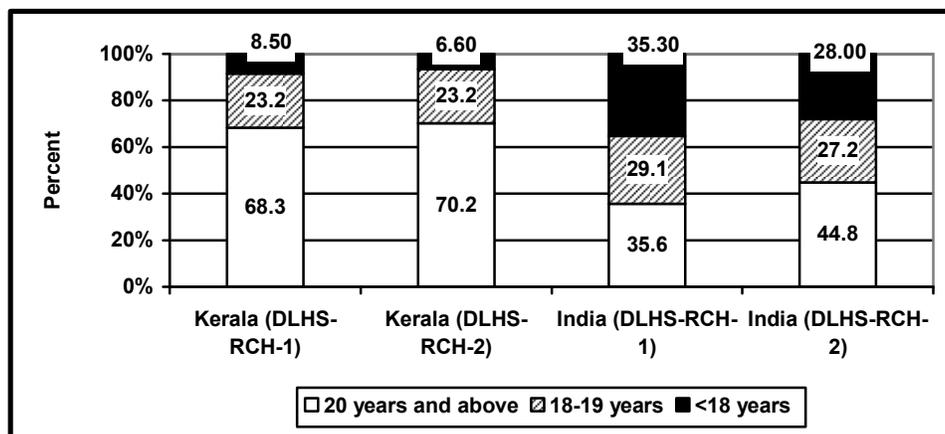
²⁴ McDonald, Peter, F. (1981), “Social Change and Age at Marriage”, *Proceedings of the International Population Conference*, Manila.

In order to understand the existing situation with respect to age at marriage the district level household survey of reproductive and child health (DLHS-RCH) conducted by the Government of India has collected information on age at marriage of all boys and girls in the selected households who got married during a three year period prior to the survey. This relates to recent marriages and thus reflects the current situation better than the overall average usually provided by mean/median age of all women in the reproductive age group.

A detailed analysis of the DLHS-RCH-1 (1998-99) data showed that 68 percent of girls in Kerala married at the preferred age of twenty years or above while that proportion was only 36 percent for all-India (See Figure 5). In Kerala, there was no marriage below 15 years, but 9 percent of the total reported marriages were in the 15-17 year age group which is below the legal minimum age. Distribution of marriages before the girl attained 18 years of age in Kerala showed a concentration of such marriages mainly in Malappuram district (39%) followed by Kannur (19%) and Kasargod (15%). In India, on the other hand, 9 percent of the total reported marriages were among children age less than 15 years and another 26 percent were in the age group 15-17 years, together accounting for 35 of the total marriages.

A comparatively recent data (DLHS-RCH -2, 2002-04) indicate that one in every four girls in India (28%) got married before attaining the legal minimum age at marriage whereas the corresponding percentage for Kerala was only 6.6 percent and it continues to be in the northern part of the state mainly in Malappuram district (45.6%).

Figure 5: Age of Girls at the Time of Marriage



Source: Computed from DLHS-RCH-1 & 2 data

5.2 Reproductive Health

The reproductive age group is generally defined as ages between 15 and 49 years, a period when women have special health needs. This is the adult life where the health of the woman will be affected more by reproductive activities, coupled with the household related work and/or wage earning work if any. Violence against women in various forms and degree will also be at its peak during the reproductive years. Reproductive health relates to health of women in all matters relating to the reproductive system, and to its functions and processes. Thus it implies that “people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition the rights of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice.....”.²⁵ In short, the health issues in this period may include health during pregnancy, delivery, post delivery, menstruation, menopause etc. as well as family planning.

5.2.1 Ante natal Care

The main focus of reproductive services in India, in addition to family planning, is pregnancy, delivery and post delivery care. Pregnancy-related health care is referred to as ante natal care (ANC), which is usually provided by a doctor, an Auxiliary Nurse Midwife (ANM), or other health professional. Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counseling on preventive care, diet during pregnancy, delivery care, postnatal care and related issues. In India, the Reproductive and Child Health Programme aims at providing at least three antenatal check-ups which should include a weight and blood pressure check, abdominal examination, immunization against tetanus, iron and folic acid prophylaxis, as well as anaemia management.²⁶

²⁵ UNFPA, *International Conference on Population and Development*, Cairo, 1994, www.unfpa.org/icpd/icpd-programme.cfm#ch7 (accessed on 13 September 2009).

²⁶ Government of India, Ministry of Health and Family Welfare, *Annual*, quoted in NFHS-3, p.192.

Data from NFHS-3 (2005-06) collected for pregnancies relating to the five year period prior to the survey shows that India has a long way to go to achieve complete antenatal coverage. Table 5 shows that almost all pregnant women in Kerala had at least one ANC visit while only three out of four in India had this checkup.

Table 5: Details of Ante-natal Care: 2005-2006 (in percent)

Items	Kerala	India
At least one ANC visit	94.4	76.4
Three or more ANC visit	93.6	52.0
Received all recommended types of ante-natal care*	63.6	15.0
<i>Quality of ANC</i>		
Mothers who were given/purchased iron and folic acid tablets	96.4	65.1
Mothers who had Blood pressure check up during pregnancy	98.5	63.8
Mothers who had at least two TT injection	88.7	76.3
Mothers who had abdominal check up during pregnancy	98.5	72.0
Mothers who had their weight taken during pregnancy	95.5	63.2

Source: NFHS – 3

* For the last live birth in the five years preceding the survey, mother received three or more antenatal check-ups (with the first check-up within the first trimester of pregnancy), received two or more tetanus toxoid injections, and took iron and folic acid tablets or syrup for three or more months.

The percent having the recommended three ANC visits is more or less the same for Kerala while the proportion is only one in two in the case of India. However, even in Kerala the percentage who received all recommended types of ante-natal care is only 63.6 and for India it is a very dismal picture of just 15 percent.

The quality of ANC when checked showed that in India, the percentage varied between 63 in the case of weight taken during pregnancy and 76 for those who had at least two TT injections. The situation in Kerala is much better with at least 95 percent having all the desired measures taken except having at least two TT injections (89 %).

5.2.2 Delivery and Post Delivery Care

Again the NFHS-3 data shows that 99.3 percent of deliveries in Kerala took place in some health care institutions and only a miniscule proportion of 0.6 percent took place at home (Table 6). Comparatively India had a much lesser proportion of institutional delivery (38.7%). Only about one in two deliveries (46.6%) was attended by health personnel in India compared to all (99.7 %) in Kerala. Percent of deliveries with post natal check up is less than half in India (41.2%) compared to 87.4 percent in Kerala, though there is scope for improvement even in Kerala. One notable aspect here is that almost a third of the total deliveries in Kerala ended up in caesarian section. It is well known that the medical risks involved in a caesarian are much higher than that in normal delivery. Several reasons are attributed to the high caesarian rate in Kerala. They include high rate of institutional delivery and higher dependence on private hospitals. It could be the profit motive operating in private sector institutions that result in the performance of a higher volume of elective c-sections. The one child norm is cited as another reason for higher proportion of caesarians. It is pointed out that in such a situation, the child and the mother are very precious and the doctor does not have much elbow space.²⁷ It is reported that in some cases, caesarian section is performed on demand by the family so that the delivery occurs at an auspicious time.

Table 6: Details of Delivery and Post Delivery Care (in percent)

Items	Kerala	India
Place of delivery:		
Health facility/institution	99.3	38.7
Public sector	35.6	18.0
Private sector	63.5	20.2
Home	0.6	61.0
Delivery attended by health personnel	99.7	46.6
Caesarian	30.1	8.5
Deliveries with post-natal check up	87.4	41.2
<i>National Population Policy (2000) goal to be achieved by 2010: 80 percent institutional deliveries and 100 percent deliveries by trained persons</i>		

Source: NFHS-3

²⁷ R.V.Asokan (2006), "Caesarian: Myths and Facts", *Kerala Calling*, June, p. 20-21. Asokan is a medical doctor and a former president of the Kerala Branch of the Indian Medical Association (IMA).

It is imperative to mention here that Table 6 speaks volumes about the impossibility of achieving the goal set by the *National Population Policy 2000* or the *National Rural Health Mission* for India whereas Kerala has already achieved these targets.

5.2.3 Fertility and Family Planning

Fertility of a woman refers to her actual reproductive performance.²⁸ Among other things, the age of first occurrence, total number of events, inter live birth interval, etc. will have an effect on fertility.²⁹ All these factors are susceptible to family planning interventions. The first birth that is healthiest for infants and mothers is the one associated with the fewest problems in pregnancy and childbirth. Measures that indicate the viability of the embryo or the functioning of the mother's reproductive system favor the age at first birth at 20 or 21.³⁰ A low fertility rate helps to improve the health of mother and child by limiting her responsibilities as mother to a few children and by limiting the pregnancy/delivery/post delivery problems to a few pregnancies. Birth interval is the time from one child's birth date until the next child's birth date. It is estimated that at least three years between births is required to improve infant, child and maternal health³¹. In conclusion, it can be said that family planning plays an important part in deciding fertility and thereby women's health. Contraception can be used to delay the first pregnancy, lengthen the interval between births, and reduce the total number of pregnancies and thereby help to reduce maternal morbidity and mortality. Table 7 gives some available information regarding this. It is heartening to note that the majority of women age 15-19 did not start child bearing indicating that early child bearing both in the country and in the state is not very common. The median age at first birth among women age 25-49 years is also in the preferred range viz. 20 for India and 22 for Kerala. The birth interval in Kerala is suitable for the health of the mother and child (41 months) though the same cannot be said about India (31 months). Kerala has already achieved below replacement level fertility while India still has to reduce the level from 2.7 to 2.1 in the course of the

²⁸ *Multilingual Demographic Dictionary* (1982), English Section (second edition), Liege, Belgium.

²⁹ Susan Zimicki, (1989), "Relationship between Fertility and Maternal Mortality" In *Contraceptive Use and Controlled Fertility*, Allan M. Parnell, Julie DaVanzo (eds), National Research Council, U.S.

³⁰ Mirowsky John (2005), "Age at First Birth, Health, and Mortality", *Journal of Health and Social Behavior*, 46(1):32-50.

³¹ Maureen Norton, James L. Griffin (ed), *Birth Spacing: A Call to Action*, USAID.

next three years, a goal set by the 11th Five Year Plan. The percentage of women having more than three children is very low in Kerala (15.5%) and that in India is very high (42%). Of the 15.5 percent higher order births in Kerala, 75 percent are from four of the fourteen districts of the state viz. Malappuram (33.5 %), Kasargod (20.8 %), Kannur (11 %) and Wayanad (10 %).

Percent of current users of any modern method of family planning is higher in Kerala (56%) than in India (49%). The percentage of users of *any* family planning method in India is 56 percent and that in Kerala is 69 percent (not shown in the Table). The male sterilization is 1.0 percent for both India and Kerala. Female sterilization is more in Kerala (48.7%) compared to the national scenario (37.3%). It is argued that the burden of contraception is solely on women in Kerala despite their attaining higher educational status. But dependence on public sector for female sterilization is low in Kerala (66.9%) compared to all-India situation (83.5%) according to NFHS-3.

Table 7: Fertility and Family Planning

Variable	Kerala	India
Women age 15-19 who were already mothers or pregnant at the time of the survey (%)	5.8	16.0
Median age at first birth among women age 25-49 years	21.9	19.8
Birth interval (median number of months since preceding birth)	41.2	31.1
Total fertility rate (SRS 2007)*	1.7	2.7
Birth order 3+	15.5	42.0
Current use of any modern method of family planning**	57.9	48.5
Unmet need for family planning among currently married women age 15-49	11.7	13.2

Source: For all data except birth order 3+ and Total fertility rate, NFHS-3, 2005-06. For Birth Order 3+, DLHS-RCH-2 (2002-04). For total fertility rate, SRS Bulletin 2007.

Note: * 11th Five Year Plan (2007-2012) goal is to achieve Total Fertility Rate of 2.1 by 2012.

**11th Five Year Plan (2007-2012) goal is to increase Couple Protection Rate (CPR) to 64 percent by 2012.

The unmet need for currently married women in the 15-49 year age group is very negligible (12 and 13 percent respectively for Kerala and India). Considering the fact that Kerala's fertility is below replacement level and that 69 percent of couples are protected by one or the other method of family planning, this low unmet need is understandable.

But India with a fairly high fertility and significant proportion of the births being of higher order, the level of unmet need appears to be an underestimation or that people still desire to have a large family size.

5.2.4 Maternal Mortality Ratio (MMR)

Maternal mortality ratio (the number of deaths to women due to pregnancy and child birth complications per 100,000 live births in a given year) is a useful indicator to capture the reproductive health status of women as well as the reach and adequacy of maternal health services available and utilized by the women. Women's risk of premature death and disability is highest during their reproductive years. Diminished health and low nutrition is amplified by early childbearing and consequent risk of serious pregnancy related complications. In India during 1990s, MMR was at least 400 as the different sources in Table 8 indicate.

Table 8: Maternal Mortality Ratio

Year	Kerala	India
1982-86 (i)	247	580
1997 (ii)	195	408
1997-98 (iii)	150	398
1999-200 (iii)	149	327
2001-2003 (iii)	110	301
2004 – 06 (iv)	95	254
Policy/Programme goal: Reduce MMR to or below 100 by 2000-2012	Concerned policy/Programme: National Population Policy (2000) National Health Policy (2002) National Rural Health Mission (2005-2012) 11 th Five Year Plan (2007-2012)	

Source: (i) P.N.Mari Bhat, *Maternal Mortality in India: An Update*, (www.iussp.org/Brazil2001/s10/s16_01_Bhat.pdf, (accessed on 12 September 2009)
(ii): Registrar General, India (1999), *SRS Bulletin*, 33 (1), April.
(iii): Registrar General (2006), India, *Maternal mortality in India: 1997-2003, Trend, Causes and Risk Factors*, New Delhi, 2006.
(iv): Registrar General (2009), *Special Bulletin on Maternal Mortality in India: 2004-06*. Sample Registration System, New Delhi, 2009.

Slight dent in MMR is noticed during the early part of this century; but it still is very high. It should be pointed out here that Kerala has already achieved the national goal set

by various agencies. But reducing the MMR around 250 to 100, in the case of India, within the stipulated time period is very difficult, if not impossible.

Malnutrition, frequent pregnancies, unsafe abortions, Reproductive Tract Infections (RTI) and Sexually Transmitted Infections (STI), all combine to keep the maternal mortality ratio in India among the highest in the world.³² In 1998, according to the Registrar General,³³ *direct causes* accounted for 72.4 percent of all the causes of maternal deaths in India and 45.5 percent in Kerala. This included causes like pregnancy with abortive outcome (8.9% in India and 0.0% in Kerala), Oedema proteinuria and hypertensive disorders (8.3% in India and 9.1% in Kerala), haemorrhage (29.6% in India and 27.3% in Kerala), obstructed labour due to malposition and mal-presentation of foetus (9.5% in India and 0.0% in Kerala), and complications predominantly due to puerperium (16.1% in India 9.1% in Kerala). Among the *indirect causes* of the maternal deaths, anaemia accounted for 19.0 percent in India and 18.2 percent in Kerala. Tuberculosis accounted for 4.6 percent and malaria 1.4 percent of the maternal deaths in India while the figures for these two diseases were nil in Kerala. Many of these deaths could have been avoided had proper care been given to the pregnant woman at the right time. According to NFHS-3 anaemia is rampant among pregnant women age 15-49 both in Kerala (33%) and India (58%).

5.3 Beyond Reproduction

Since 1961, the number and the proportion of the elderly in the population has increased consistently in India due mainly to the improvement in medical facilities resulting in the steady decline in mortality rates and the consequent increase in longevity. Decline in fertility rates also contributed to ageing of the population. In 2001, there were in India 7 percent of males and 8 percent of females aged 60 years and above compared to 9 percent of males and 12 percent of females in Kerala. Among the elderly females in India, 51 percent in 2001 were widows and in Kerala the corresponding proportion was 59 percent (Table 9).

³² World Bank (1996), *Improving Women's Health in India*, Washington D.C.

³³ Registrar General of India (2000), *SRS Bulletin*, 33 (1), April.

Table 9: Percentage of Widowed among the Elderly (60+): 2001

Age Group	India		Kerala	
	Male	Female	Male	Female
60-64	9.83	40.00	4.02	41.97
65-69	12.46	44.97	6.35	53.97
70-74	17.51	63.29	10.57	66.22
75-79	21.16	60.62	15.37	73.95
80+	28.94	71.01	27.84	82.85
Total (60+)	14.98	50.66	9.71	58.69

Source: Computed from Census 2001 Tables C-Series

As age advances, the share of widows is more in Kerala than in India. In this male dominant society a widow has very low status in the household and, in some communities; they are virtually shunned from attending any function in the family. Further, some studies have shown that widowed women have higher rates of illness and perhaps the chances of their seeking health care may also be low.

Health risks and concerns change as a woman ages during her life span. Many are natural consequence of the process of ageing such as low vision/blindness, deafness, loss of mobility and a general inability to care for oneself. In fact, all individuals suffer a weakening of physical and mental capabilities sooner or later. It is also a period characterized by decline in status at home and society, decline in decision making power, decline in social and friendship network, development of a feeling of loneliness and uselessness, development of a question of living arrangement, and development of economic and/or physical dependence. All these will have an adverse effect on their mental framework. Health seeking behaviour and compliance to treatment are significantly influenced by mental health status. Conversely, many physical illnesses can have a mental health impact.³⁴

Health care of older persons is a major concern in India as their share in the total population is increasing very fast. Moreover, as they age, older persons will have to make some serious adjustments in life which is a kind of downward shift unlike the change from childhood to adulthood. With the downward shift, which means making room for

³⁴ *Mental Health, Poverty & Development*, www.who.int/mental_health/policy/development/en/index.html (accessed on 3 September 2009).

others, comes a series of mental, physical and emotional modifications for which most of the aged often are not prepared for. To add to their helplessness, elder abuse in India is becoming more common than it was before. All types of abuses take place, but the problem is largely hidden under the shroud of family secrecy. Also, the signs of elder abuse are not often recognized, leading to gross under-reporting of the problem.³⁵ Though most of these problems are common to both men and women, the latter suffer more as they enter the old age more or less exhausted, physically and mentally, due to household and/or external work besides reproductive activities during the adult age not to mention the care they gave to children, the sick and the aged at home. Yet again, their life expectancy is higher than that of men meaning they have to suffer the problems for a longer period. In the following sections some of the health related issues (other than reproductive health) of women are discussed.

5.3.1 Menopause

Menopause is a natural phenomenon and occurs in every woman in her late forties or early fifties. This is a gradual biological process which culminates in the cessation of ovulation and menstruation. At the start of this period, less estrogen and progesterone hormones are produced by the body and eventually their production stops. Without the protective qualities of estrogen, and with the added effects of aging, women may be vulnerable to some serious health problems during the menopausal period. Some of them are hot flushes, vaginal dryness, bladder infections, emotional change, fatigue, irritation and poor memory. These problems create more stress among these women and stress places an extra load on many body processes, influencing immune function, hormonal regulation, biochemical interactions, digestion, cardiovascular performance and nervous response.³⁶ “These changes can be traumatic and psychologically challenging for women”.³⁷ Many of these problems can be prevented or delayed, and women can continue to live active healthy lives after the menopausal years if proper attention is given to their health needs. Also its impact can be made tolerable if the co-residents

³⁵ National Center on Elder Abuse (1999), *Elder Abuse Information, Series No. 1*, Washington, DC.

³⁶ The Body Corporate Wellness News (August/September 2002), Untitled document. www.bodycorp.co.nz/newsletters/0802.htm (accessed on 12 August 2009).

³⁷ *India Together* (29 October 2009), www.indiatogether.org/2006/oct/wom-menopaus.htm (accessed on 12 November 2009).

(particularly the husband) can be a little understanding, sympathetic and loving towards the sufferers.

Studies in India relating to menopause focus mostly on age at menopause³⁸, problems women face due to it³⁹ etc. many of which are small localized studies. Further there is no agreement on the average age at which Indian women attain menopause. It is said that the menopausal age of Indian women varies between 40.3 to 44.8 years. Going by the current expectation of life at birth, a woman has about a third of her lifetime to be spent in menopausal years. There is lack of awareness regarding menopause and related problems even now among women as many take it as a part of life to be endured. It should be pointed out here that studies relating to knowledge of menopause, knowledge of how to cope with it to have a satisfactory life and how women are actually coping with it are very limited. Such studies are essential on a country wide basis to evolve any meaningful policies.

5.3.2 Elder Abuse

Elder abuse is a hidden problem, frequently masked under the veil of family secrecy. Particularly in countries like India, where elders are traditionally revered, awareness is just now developing that abuse does occur.⁴⁰ Several social issues are involved in dealing with elder care. “The dwindling of joint family system, rise of dual-career families, a possible shift in filial piety values, increasing life expectancy along with poverty, degeneration, more empty-nest years, and dependency adds to the complexity of these social issues”.⁴¹ In old age physical, emotional and economic dependence increases in varying degrees which will have an impact on health. A survey conducted by the National Sample Survey Organization in 2004⁴² found that 41 percent of elderly males

³⁸ T.S.Syamala and M.Sivakami (2005), “Menopause: An Emerging Issue in India” *Economic and Political Weekly*, 40(47): 4923-4930; Nitika Baghla and Shubhangna Sharma (2008), “Onset Age of Menopause Among Women in Kangra District of Himachal Pradesh”, *Anthropologist*, 10(4): 305-307.

³⁹ Dr A. Singh, AK Arora (2005), “Profile of Menopausal Women in Rural North India”, *Climacteric*, 8 (2) June: 177 – 184.

⁴⁰ Sally Balch Hurme, J.D., “Perspectives on Elder abuse”, www.assets.aarp.org/www.aarp.org/articles/international/revisedabusepaper1.pdf (accessed on 12 September 2009).

⁴¹ Jamuna D (2003), “Issues of Elder Care and Elder Abuse in the Indian Context”, *Journal of Aging & Social Policy*; 15 (2-3):125-42.

⁴² NSSO (2006), *Morbidity, Health Care and the Condition of the Aged 2004, NSS 60th Round*. NSSO, New Delhi.

and 69 percent of the elderly females in Kerala were economically fully dependent on others. The corresponding all-India figures were 32 percent and 72 percent. The need to be understood, cared and loved leads to emotional dependency. Older persons would like people to be kind to them which the care givers should understand and provide. But in this fast changing materialistic world, no one is found to have the required time or the inclination. As long as the elderly are useful, they will be endured. With more and more women taking up paid jobs, the old woman will have to take care of the household and related activities. So instead of her being taken care of, her job of taking care of others will continue. But the cessation of usefulness marks the beginning of abuse of one nature or the other for both men and women. Since women live longer, are mostly home bound and financially dependent than men, they are soft targets for abuse.

Elder abuse which can take place at home or in the institutions where they reside can take different forms like physical abuse (hitting, beating, kicking,...), emotional abuse (insults, threats, humiliation, forced social isolation...), sexual abuse (unwanted touching, coerced nudity, and sexually explicit photographing...), financial abuse (cashing a person's checks without authorization or permission, forging a signature, coercing or deceiving a person into signing any document...), care giver abuse (refusal or failure to provide life necessities such as food, water, clothing, shelter, medicine, comfort, and personal safety) or by elders themselves (refusal/failure to provide oneself with adequate food, water, clothing, shelter, medication when needed...). These are things that will have an impact on their physical or emotional health depending on the type of abuse. But data on elder abuse is not easy to obtain as parents would never like to talk ill of their children irrespective of the sufferings they endure. This reduces the chances of assessing the extent of abuse and is an area begging attention from the researchers. In sum, it can be said that even though adding years to age has been viewed as an achievement, the society is not fully prepared to take care of the elderly, particularly the women, in all its varying elements.

5.3.3 Institutional Care/Old Age Homes

In India, the culture of sending elderly persons to Old Age Home is fast developing. In 2002, of the total 1018 old age homes in India registered with the Help Age India, 186 are from Kerala⁴³. But neither the actual number of old age homes nor the number of elderly living there is clearly known. For elderly who really would like to be with their kith and kin in their old age, old age home is not a good alternative though the children/relatives view it as such. Currently, at least five old age homes are coming up in Kerala every year.⁴⁴ A study by Irudaya Rajan shows that 60 percent of the inmates of old age homes are women.⁴⁵

5.4 Women's Health and Home Environment

Most of the challenges to women's health today come from outside the health field and included in this category are domestic violence, fuel used, sanitation facility and drinking water availability.

5.4.1 Health and Domestic Violence

Violence against women is widely recognized as an important public health problem, due to its significant consequences for women's physical, mental and reproductive health. It is also a complex social problem with far-reaching health consequences. Domestic violence constitutes a major part of the total violence against women. Though men can also be victims, domestic violence is nearly always a gender specific crime perpetrated by men against women.⁴⁶ Females of all ages are victims of violence, but it will be more so at adult age. According to Heise⁴⁷, violence against women is detrimental to economic development because it deprives women of the ability to participate fully in the economy by reducing their emotional and physical strength. Violence against women also can have

⁴³ Kumar, Dhaleta Surender (4 October 2004), "Old Age Homes not the Best Solution", *Indiapost.com*, and republished in January 13, 2007.

⁴⁴ Government of India, Planning Commission (2008), *Kerala Development Report*, Academic Foundation, New Delhi.

⁴⁵ Irudaya Rajan, S (2000), "Home Away From Home: A Survey of Old Age Homes and Inmates in Kerala", *Working Paper No. 306*, Centre for Development Studies, Thiruvananthapuram.

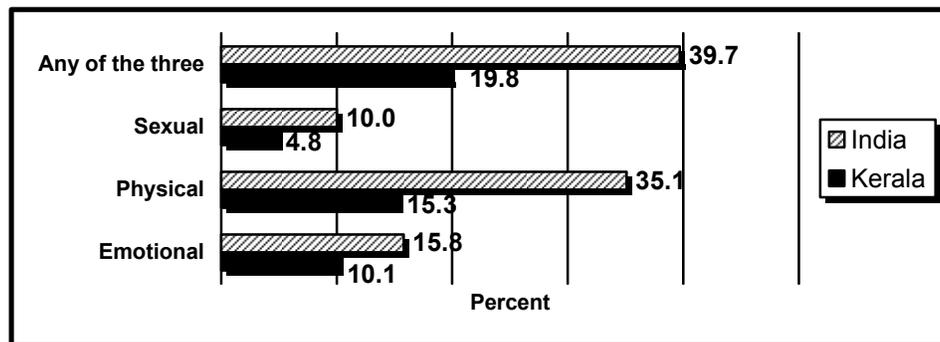
⁴⁶ Jaising, Indira (November 2002), "Reconsidered: Dangerous Bill", *India Together*, New Delhi

⁴⁷ Heise, Lori L. (1994), "Violence Against Women: The Hidden Health Burden", *Discussion Paper 255*, World Bank, Washington, DC.

negative consequences for the children of the victims.

An analysis of the data of domestic violence which was recorded in the Kerala State Crimes Records Bureau (KSCRB), under the state government's home department, has revealed that nearly 50 percent increase in wife-beating complaints registered at police stations in the state during the period 1998-2008.⁴⁸ Domestic violence can be physical, sexual, emotional and economic. Many of these are very difficult to measure or get information from women. Some data on different types of violence was collected in the NFHS-3.⁴⁹ Emotional violence could be the most common form of violence which almost all women in India are more than likely to face but this has not come out from this data (Figure 6). Perhaps the respondents never see emotional violence as “*violence*” as that term has a different connotation. As such the information given in Figure 6 should be treated as the absolute minimum level of violence prevailing in the country.

Figure 6: Percent of Women Experiencing Different Types of Violence by their Husband



Source: NFHS-3

In Figure 6 physical violence is the highest in both Kerala and India. One in every three women in India experienced physical violence with the corresponding data for Kerala being 15 percent. But there is no data to understand the extent or the depth of the violence though this type of violence often aggravates any physical health problem they may have.

⁴⁸ Harikrishnan, K.S., “Kerala Women Are Battered Wives”, www.ipsnews.net/news.asp?idnews=48738 (accessed on 21 November 2009).

⁴⁹ However, one should be very cautious in relying on this data as this type of a large scale survey with their focus on other aspects is hardly the source from which reliable data on violence can be expected. Reporting of violence against oneself of any nature is a very sensitive area and women would not like to disclose it to anyone, leave alone to a stranger like the investigator.

Note that about 20 percent of Kerala women were subjected to sexual/physical/emotional violence while this percent is double for India (40%).

5.4.2 Dowry and Suicide

In "arranging" a marriage⁵⁰, "dowry" plays an important part. It is becoming all-pervasive and cuts across all boundaries of class or castes. This octopus is squeezing the life out of many brides literally and figuratively. If the bride fails to "bring" the expected dowry, she faces the greatest risk of violence at home where husband/in-laws may abuse, assault, rape or even kill her. But an accurate picture is difficult to obtain, as statistics are varied and contradictory. The problems faced by the bride in the house of her husband will never be told to anyone (leave alone reporting it to the police) unless it become life threatening.

According to data compiled by the National Crime Records Bureau (NCRB), a total of 2276 female suicides due to dowry disputes were reported in 2006 - six a day on average. This national figure was 2305 in 2005. In 2004, at least 2585 such cases were registered across the country. On average one Indian woman commits suicide every four hours over a dowry dispute, according to official data, despite a series of laws to empower them...⁵¹ These suicides are the ultimate resort before which the women suffers a lot of mental and physical abuse. Most crimes against women in our country are not reported and statistics given above touch only the tip of the proverbial iceberg. This is a social evil that is rampant in Kerala, the highly literate state in the country. Understanding the depth of this problem is essential to understand its effect on different aspects of health.

5.4.3 Other Factors in Home Environment

There are factors in the home environment such as safe drinking water, fuel used for cooking and sanitation facility that can affect all the members of the family but more so the women. People need water every day. Without an affordable and reliable supply of

⁵⁰ Marriage in India, generally, is not just a concern between two individuals but is the establishment of a relationship between two families, the bride and the groom serving as the connecting link. It is arranged by parents/elders taking into consideration many social, economic, demographic and cultural factors.

⁵¹ www.4to40.com/newsat4/print.asp?id=1224&news=Indian_Woman (accessed on 29 September 2009).

water and effective sanitation, basic human rights are infringed.⁵²

5.4.3.1 Safe Drinking Water

In almost all houses in India women use more water than others as they have the responsibility of cooking, cleaning, washing etc. When water is not available within or near the house they will have to ensure availability of water at home by getting it from a distant source be it a well or a pipe. Carrying water for the use of every one at home could be very tiring and energy sapping. Moreover, women and girls travelling long distances alone to get the much required water can be dangerous to them as sexual harassment/assault while gathering water is not unheard of. If the household has to depend on well water (be it near or far away) pulling the water up from the well is also a women's job.

According to Planning Commission (Government of India, 2002) 69 to 74 percent of India's rural population and 91 to 93 percent of India's urban population take their drinking water from protected sources.⁵³ But the role of women in making this water available is not even looked into. NFHS-3 shows that 69 percent of the sample houses in Kerala uses improved sources of drinking water like piped water within the dwelling, public tap, tube well, protected well etc. In India, on the other hand, this proportion is 87.9 percent (Table 10).

Table 10: Source and Time Taken for Sourcing Drinking Water (in percent)

<i>Source</i>	Kerala	India
Improved source	69.1	87.9
Piped water within the dwelling	12.9	24.5
Public tap	11.7	17.5
Tube well/bore well	3.6	42.8
Protected dug well	40.0	2.5
Others	0.9	0.6

⁵² www.aquafed.org/pdf/Gender_Aquafed_EN_Pc_2007-03-08.pdf (accessed on 14 September 2009).

⁵³ Government of India (2002), *India: Assessment 2002: Water supply and sanitation*, A WHO-UNICEF sponsored study, Planning Commission, New Delhi.

Non-improved source	30.9	12.1
Total	100.0	100.0
<i>Time to obtain drinking water (round trip)</i>		
Water in the premises	78.2	51.3
Less than 30 minutes	18.8	36.5
30 minutes or longer	2.9	11.9
Don't know/Missing	0.1	0.2
Total	100.0	100.0

Source: NFHS-3

At the all-India level tube-well/bore well is the main source of drinking water. In Kerala, most of the households use well water. There are both protected and unprotected wells with 40 percent protected wells and 29 percent unprotected wells (not shown in the Table). Generally, almost all wells in Kerala are private wells and are located on the premises of the house or are accessible within 30 minutes round trip. This indicates that women need not carry water to long distances. However, well being the main source of water, women will have to pull the water up from the well. It is a very demanding task that could adversely affect the health of the woman in the long run.

5.4.3.2 Fuel

The traditional fuels like firewood, agricultural residue and animal waste are still the prominent ones used in India. This has two major consequences on the health of women. (i) Traditionally it is the duty of the women to get cooking fuel and their carrying head loads of fuel woods is a common sight in the rural parts of the country. However, the weight of such head load is much more than what they can carry. They also make dung cakes by naked hands sitting in one position for a long time. Needless to say that both these will have adverse consequences on their health. (ii) Burning wood/dung cake/charcoal etc, for cooking produces smoke to which the women and girls are exposed to, much more than the men and boys. It is said that a pollutant released indoors is several times more likely to reach people's lungs since it is released at close proximity than a pollutant released

outdoors.⁵⁴

The results of a study done by Mishra *et al* strongly suggested that the use of biomass fuels (wood or dung) for cooking substantially increases the risk of tuberculosis in India.⁵⁵ Besides, it is also found that women living in households that use biomass cooking fuels have a much higher prevalence of both partial and complete blindness than women living in households that use cleaner fuels.⁵⁶ Census of India 2001 and NFHS-3 collected data on cooking fuel used by the households. Data from both the sources shows that wood is the most common fuel used by majority the households in Kerala (Table 11).

Table 11: Type of Fuel Used for Cooking (in percent)

Type	2001		2005-06	
	Kerala	India	Kerala	India
Solid fuel	79.3	72.3	70.8	63.2
Firewood	77.4	52.5	47.0	48.7
Crop residue	1.8	10.0	23.8	3.9
Cow dung cake	0.1	9.8	0.0	10.6
LPG	17.7	17.5	26.4	24.7
Others	3.0	10.2	2.8	12.1
Total	100.0	100.0	100.0	100.0

Source: Census of India 2001 and NFHS-3 (2005-06)

But the use of dung cakes/crop residue etc. is almost absent in Kerala according to Census and one-fourth of the households use this according to NFHS-3. Notwithstanding this difference, solid fuel is the most common form of fuel used and this is a serious health hazard as shown in the studies mentioned above and tuberculosis and blindness are the major possible illnesses.

5.4.3.3 Sanitation

When sanitation facility is defined as percent of population having sanitary facility in the disposal of human excreta in the user's dwelling or located within a convenient distance

⁵⁴ Sundari Ravindran, T.K. (May 2000), "Engendering Health", *Seminar* (Issue on Unhealthy Trends: A Symposium on the State of our Public Health System).

⁵⁵ Vinod K.Mishra, R.Retherford, K.Smith (1999), "Biomass Cooking Fuels and Prevalence of Tuberculosis in India" *International Journal of Infectious Diseases*, 3 (3): 119-129.

⁵⁶ Vinod K. Mishra Robert D. Retherford, and Kirk R. Smith (1999), "Cooking with Biomass Fuels Increases the Risk of Blindness", *NFHS Bulletin*, No.14, April.

of the user's dwelling, NFHS-3 reports a situation of having toilet facility for 91 percent of the households in Kerala and 29 percent in India. The *Human Development Report* estimates that only 33 percent of the population in India had adequate sanitation facilities⁵⁷ in 2004. Women are the worst sufferers, as they do not relieve themselves in public the way men do. It is of importance to mention here that without adequate safe drinking water and sanitation facility, food and nutrition security alone will not make the required impact on the people's health.

5.4.4 Other Illnesses

“Besides their special health needs that are different from those of men due to biological differences, women are also exposed to all the health problems that affect men throughout their lifecycle. Thus tuberculosis, occupational and environmental health hazards – all these impact women's health too. In fact, since infections such as malaria and hepatitis become life-threatening conditions for women during pregnancy, they are issues of special concern”.⁵⁸ However, reliable data for any of these illnesses cross classified for sex and also whether the woman was pregnant at the time of contracting the illness or other-wise is hardly available. It is estimated that 25 to 38 percent of all women and men are infected by tuberculosis at one or the other stage of their life.⁵⁹ The findings of World Health Organization indicate that women progress from infection to active TB faster than men do, but the reported incidence of pulmonary TB among women is nearly always lower than that for men.⁶⁰

Cancer is another major illness the prevalence rate of which is not correctly known. According to the hospital based Cancer registry at Regional Cancer Centre (RCC) at Thiruvananthapuram (Kerala), breast, cervix uteri and thyroid are the leading sites of cancer among females while lungs, leukemia and tongue are the leading sites among males (Table 12).

⁵⁷ UNDP, *Human Development Report* 2007/2008.

⁵⁸ Sundari Ravindran T.K, 2000 *op cit*.

⁵⁹ www.ourjeet.com/general/tb_women.asp (accessed on 14 September 2009).

⁶⁰ World Health Organization (2005), *Gender in Tuberculosis Research*.

Table 12: Leading Sites of Cancer among Patients Treated by Sex in the Regional Cancer Centre at Thiruvananthapuram (January to September 2008)

Male		Female	
Site	No. of patients treated	Site	No. of patients treated
Lung	697	Breast	1411
Leukemia's	555	Cervix Uteri	502
Tongue	328	Thyroid	485
Lymphomas	310	Leukemia	357
Mouth (BM)	235	Ovary	237
Larynx	234	Lymphomas	157
Esophagus	228	Mouth (BM)	136
Stomach	220	Tongue	135
Secondaries	213	Secondaries	129
Brain	153	Body of Uterus	128

Source: Economic Review 2008, Government of Kerala

Based on data from a Rural Cancer Registry (Karunagappally, Kerala) for an earlier period (1993-97), Krishnan Nair reports that 19% of cancer among rural women was breast cancer while Cervix cancer and tobacco related cancers constituted 18 percent each. A large number of factors are identified as risk factors for breast cancer. Late age at first pregnancy, greater than 30 years, single child, late age at menopause etc are some of them. Reduced physical activity is yet another factor. High fat diets during the pubertal age and obesity in the post menopausal age are risk factors for breast cancer.⁶¹ Among males, almost half of the cancers were tobacco related.⁶² These cancers are identified as amenable for control.

The recent addition to the whole list of morbidity is HIV/AIDS. The total number of estimated HIV-positive adults living in India in 2005 is more than 2.31 million.⁶³ The estimated adult prevalence is 0.44 percent among males and 0.23 percent among females. Women are more likely than men to contract a sexually transmitted infection (STI) because of biological factors and they are less likely to seek treatment due to cultural

⁶¹ www.rcctvm.org/lifestyle%20and%20cancer.htm (accessed on 14 November 2009).

⁶² Krishnan Nair M., "Cancer Control in Kerala, India", www.mohfw.nic.in/pg122to136.pdf (accessed on 12 September 2009).

⁶³ Government of India (2009), *Annual Report 2008-2009*, Department of AIDS Control, Ministry of Health & Family Welfare.

factors. Even though data are very scarce in revealing the accurate situation relating to STIs and HIV/AIDS, particularly at the state level, it is said that STIs including HIV/AIDS are spreading in India.

5.4.4.1 Occupational Health

The issues related to the occupational health of women in Kerala have received only limited attention. A large number of women in Kerala work as agricultural labourers and plantation workers in rural areas and as production process workers in urban areas.⁶⁴ The situations in which these women are working are not conducive to good health. For example women working in fish processing industry work in unhealthy and unhygienic conditions. Further, the need for continuous work often in uncomfortable and improper sitting position and sitting on the wet floor increases the chances of morbidity. Many also have skin diseases, especially on hands, as they usually work without wearing gloves and the tasks are performed with abundant use of ice-cold chlorinated water.

The health condition of the women workers in cashew industry in the state, which has the largest cashew processing units in India, is not different. Women perform manual tasks such as shelling, peeling, and grading while sitting on the floor. A recent study⁶⁵ of cashew processing units in Kerala pointed out the deplorable physical working conditions such as unhygienic floors, dirty work surroundings, stinking latrines and occasional accidents because of falling and dilapidated roofs. The situation of coir workers is no different. A study conducted by the TD Medical College indicated the higher morbidity among female coir workers compared to workers in other sectors. Prevalence of symptomatic diseases such as rheumatism, chest pain, joint pain, bronchial asthma was higher among coir workers, particularly those engaged in spinning coir yarn.⁶⁶ It may be noted that around four-fifths of the coir workers are engaged in spinning activity which is mostly undertaken by women. A recent study by Centre for Socio-economic &

⁶⁴ Government of India, Planning Commission (2008) *op.cit.*

⁶⁵ Thresia C.U. (2007), "Interplay of Gender Inequities, Poverty and Caste: Implications for Health of Women in the Cashew Industry of Kerala", *Social Medicine*, 2 (1) March: 8-18.

⁶⁶ Department of Community Medicine, T.D.Medical College (1998), "Report of the Clinical Epidemiological Study of the Health Status of Coir workers in Shertallai and Thrikkunnapuzha Villages in Alleppey District", T.D.Medical College, Alleppey.

Environmental Studies⁶⁷ also indicated high prevalence of such diseases among coir workers. Nearly half of the workers reported occupation related health problems. It may be noted that Kerala has a dominant position among the states in India in all these three industries. Specific schemes are required to address the occupational health problems of the women workers in such industries. .

5.4.4.2 Overweight and Obesity

The nutritional status presented in the Table 13 brings out another dimension of Kerala's health scenario viz. obesity and overweight. Though marked thinness is less prevalent in Kerala compared to the national scenario, the percentage of women who are overweight/obese is much higher in Kerala compared to the all India situation. In fact, in Kerala the proportion of overweight/obese women exceeded that of underweight/thinness. It is also found that the difference between men and women is more marked in Kerala. In 1998-99 the obese women in Kerala was 17 percent which has increased to 28 percent in 2005-06. Obesity is known to create health problems which need to get the attention of health officials making policies and plans for the future.

Table 13: Percentage of Women and Men Age 15-49 with Specific Mean Body Mass Index (BMI) Levels: 2005-06

BMI (in Kg/m ²)	Kerala		India	
	Male	Female	Male	Female
Thin (<18.5)	21.5	18.0	33.7	35.6
Overweight (25.0 to 29.9)	15.7	23.1	8.4	9.8
Obese (≥30.0)	2.1	5.0	1.3	2.8
Overweight or obese	17.8	28.1	9.7	12.6

Source: NFHS-3

5.4.4.3 Mental Health

According to the WHO, gender differences occur particularly in the rates of common mental disorders - depression, anxiety and somatic complaints. These disorders, in which women predominate, affect approximately 1 in 3 people constitute a serious public health

⁶⁷ CSES (2008), "Report of the Census of Coir Units and Sample Survey of Coir Workers in Kerala", CSES, Kochi.

problem globally.⁶⁸ The response of the family and the society about the mental illness of men and women can be different. There can be differences in the attention received, care seeking behaviour, approach of the family towards the mentally ill and the causes of the mental illness. This calls for a gender sensitive approach to mental health care.

According to a recent survey on mental health, women in Kerala experience higher degrees of mental stress and anxiety and lower mental well being compared to men.⁶⁹ The findings of the survey also indicate that the level of psychological well being declines as people grow older for both males and females. The difference in mental well being between men and women is marked in age groups 25-34 and 55+. The former age group coincides with child bearing/rearing years and the latter with old age. “The Kerala State Mental Health Authority (KSMHA) draws a poignant picture of the state which has an increasing trend in suicides among females between the ages 15-29 year. Marital stress is cited as a major reason”.⁷⁰

5.4.5 Privacy and Confidentiality in Health Care Institutions

Though not a health problem *per se* the privacy and confidentiality in health care assumes importance as it can affect the health seeking behaviour of women. The right to privacy and confidentiality during consultation with doctor and treatment are more important for women than men. Exclusive consultation rooms are required for each doctor in a health institution to ensure privacy while examining the patients. A study conducted by CSES in 2005⁷¹ found that majority of the Taluk hospitals, CHCs and PHCs do not have separate consultation rooms for each doctor. In such institutions, more than one doctor sits in the same room. In some institutions, not even a make shift partition is arranged. The patients also keep waiting by the door, which is kept open in many of the PHCs. The patients were also found to be standing inside the consultation room when the doctor was examining another patient. Anecdotal evidences indicate that the situation is not much

⁶⁸ www.who.int/mental_health/prevention/genderwomen/en/ (accessed on 1 November 2009).

⁶⁹ Mohamed E, S Irudaya Rajan, K Anil Kumar and P M Saidu Mohammed (2002), Gender and Mental Health in Kerala, Institute of Social Studies Trust. The survey covered 2740 males and 2710 females in 1000 households distributed all over Kerala.

⁷⁰ Harikrishnan K.S (2009), op.cit.

⁷¹ CSES (2006), Report of the Baseline Survey of Institutions under the Service Delivery Project, CSES, Kochi.

different in many of the private hospitals. Such a situation can discourage women from seeking health care unless they reach an unendurable stage.

6. Summary and Conclusion

This paper examined the health status of females in Kerala, a state ranked at the top in terms of human development index, social development index and gender development index among the states in India. The state is often described as a land of 'good health at low cost' and is reported to have the lowest rural-urban inequalities in public health status. The paper attempted to travel along the life of Kerala women picking up elements that are relevant to a health study. For comparison, the national scenario is presented. Wherever possible, a comparison is made with men. The paper also tried to identify gaps in data relevant for bringing out the profile and made use of narratives/anecdotal evidences to highlight problems.

The indicators considered in this paper can be broadly categorised as those reflecting the general health status, child health, reproductive health and health of the elderly. Some environment related variables have also been analysed. Sex ratio, life expectancy and crude death rates were taken to measure the general health situation. The traditional thinking that sex ratio should ideally be skewed towards more females than males was modified in favour of equality because of the tremendous improvement in the field of health. The sex ratio of 1058 females per 1000 males in Kerala or that of 933 females per 1000 males in India in 2001 differs from the equality in sex ratio. The high sex ratio in Kerala could be due to (1) out migration of more males than females and (2) higher survival rate of females compared to males. High sex ratio and higher survival rates for females implies that there are more women in Kerala than men whose health needs are to be met and that the number of years needing geriatric care is more for women compared to men.

As in the case of other parts of the country, the sex ratio among the child population aged 0-6 years in Kerala has been favourable to males. But this has to be viewed along with the fact that 104-107 boys are born for every 100 girls in any given society. The sex ratio in the 0-6 age group showed a decline both in Kerala and in India during the period 1961-

1991. It improved marginally during 1991-2001 in Kerala while there was further decline at the national level. It may also be noted that sex-wise differences were not marked in the case of Infant Mortality Rate in Kerala, which is much below the national rate. The gender difference is negligible in Kerala in the prevalence of wasting, stunting, under weight and anaemia among children also. Even the small differences that exist in Kerala favour females.

The analysis indicated that more than two-thirds of girls in Kerala got married at the preferred age of twenty years or above as against about one-third at the national level. About one-in-ten reported marriages in Kerala were in the 15-17 year age group which is below the legal minimum age. Nearly three-fourths of such marriages were from the three districts of Malappuram, Kannur and Kasargod. The higher order births were also more in these districts. It implies that there are differences between districts in achievements in the health sector and therefore a uniform strategy for the whole state may not be appropriate. Specific interventions are required in these districts to increase the age at marriage which may be initiated under the RCH project.

The health issues in the reproductive age relate to pregnancy, delivery, post delivery, menstruation, menopause, family planning etc. On these aspects also, Kerala's position is better than the national scenario. Most of the pregnant women in Kerala had made the recommended three antenatal care visits. Almost all deliveries in Kerala took place in health institutions while institutional deliveries formed only 39 percent at the all India level. But there is scope for improvement in ante natal and post natal care in Kerala. Only two-thirds have received all recommended types of ante-natal care and post natal check up was not done in 13 per cent of the cases in Kerala.

One notable aspect here is that almost one-third of the deliveries in Kerala were caesarian sections. The caesarian rate in Kerala is more than three times the national rate and is much higher than the maximum justifiable rate of 15 percent recommended by the World Health Organisation.⁷² Though it is mandatory for the hospitals to report to the local governments on the details of delivery including whether a caesarian was performed,

⁷² Quoted in Guo Sufang et al (2007) *op.cit.*.

such data is not compiled at the hospital level to facilitate interventions. Further research on the high caesarian rate in Kerala, its reasons and consequences needs to be undertaken. It is also interesting to note that the number of ANC visits is much higher in Kerala compared to the all-India scenario. According to NFHS-2, the average number of ANC check-ups per pregnancy in Kerala in 1999 was three times the number of check-ups at the national level (8.7 in Kerala and 2.8 at the national level). ANC visits more than what is required can lead to higher medication and larger use of medical equipments. Anecdotal evidences indicate the frequent use of technology, drugs and surgical procedures even in low risk pregnancy and delivery. It is also likely that Keralites are over sensitive to medical problems leading to over medicalisation. It appears that the over medicalisation of maternal care has led to escalation of the cost of the pregnancy and child birth. According to the NSSO 60th round,⁷³ the average expenditure per child birth, ante-natal and post-natal care is much higher in Kerala than at the national level not only in the private sector but also in the public sector.

Kerala's low fertility rate, which is below replacement level, has helped to improve the health of mother and child by limiting the mother's responsibilities as mother to a few children and by limiting the pregnancy/delivery/post delivery problems to a few pregnancies. The birth interval in Kerala is also suitable for the health of the mother and child (41 months) though the same cannot be said about India (31 months).

Maternal mortality rate in Kerala is relatively low though the decline in MMR is not as fast as the decline in infant mortality rate. The causes of maternal death need to be explored further. Such an analysis should bring out the MMR among different communities/social and income groups so that interventions targeting these vulnerable groups can be planned.

It is estimated that by 2026 one in every five persons in Kerala will be aged at least 60 years, leading to a new type of health problem for the state. Among the aged, a higher proportion will be females majority of whom are likely to be widows. At the same time, there will be a decline in the share of children in the population. This would necessitate a

⁷³ NSSO (2006) op.cit.

re-thinking on state's spending pattern particularly in the health sector.

The physical, emotional and economic dependence of the elderly on others and its impact on health is another issue which needs to be explored further. Since women live longer, are mostly home bound and financially dependent than men, they are soft targets for abuse. But data on elder abuse is not easy to obtain. Qualitative studies are required to develop further understanding on different dimensions of elder abuse. Similarly, studies relating to knowledge of menopause, how to cope with it and how women are actually coping with it are essential on a country wide basis to evolve meaningful policies for educating women to help them lead a healthy life during and after the menopausal years.

Access to safe drinking water, type of fuel used and the sanitation facilities are important in the context of the health of people particularly women. Though data related to access to drinking water is available from many sources, the role of women in making this water available is not even looked into. In Kerala, wood is the fuel used by majority the households. This has to be viewed along with the findings of studies which points out that the risk of tuberculosis and blindness is higher among women living in households that use biomass cooking fuels compared to those living in households that use cleaner fuels. The situation in Kerala with regard to sanitation facilities is satisfactory as most of the households have toilet facilities within the premises.

There are some other issues which need to get the attention of the health policy makers at the state level. Occupational health is one such issue. Majority of the workers in tea plantations, coir factories, cashew factories and fish processing units are women. These women usually work in unhealthy situations. Specific schemes are required to address the occupational health problems. Another emerging health issue is obesity. Obesity is much higher among women in Kerala compared to the all India situation. It is also more for women compared to men.

Domestic violence is another issue which has significant consequences for women's physical, mental and reproductive health. NFHS-3 data showed that the prevalence of violence is lower in Kerala compared to the all-India situation. But there is no data to understand the extent or the depth of the violence. Moreover, emotional violence which is

likely to be the most common form of violence has not come out from this data. Mental health of women is yet another issue which has a gender dimension. Women in Kerala experience higher degrees of mental stress and anxiety and lower mental well being compared to men. There is also an increasing trend in suicides among females between the ages 15-29 years. Marital stress is cited as a major reason. It may be noted that the response of the family and the society about the mental illness of men and women can be different. There can be differences in the attention received, treatment seeking behaviour, approach of the family towards the mentally ill and the causes of the mental illness. This calls for a gender sensitive approach to mental health care.

In sum, the health profile of a Kerala woman is much better than that of an Indian woman. The discussion indicates that the problems related to women's health in Kerala are different from those addressed at the national level. Therefore, priorities, approaches and strategies set at the national level may not be appropriate for Kerala. Hence, moving in the same pattern as other states based on the conventional strategies for health improvement may not be advisable or adequate for Kerala. The state needs a strategy for achieving the state-specific goals. It is also important to examine whether the health policies of the state has been responding with gender sensitivity to the varying health care needs of women beyond and before the reproductive age. Often, women's health is regarded as synonymous with reproductive health. It is also important to note that women are not a homogenous group and differences persist among women based on their socio-economic status, living and working environment etc. The state needs to work out strategies specific to particular groups of people who are vulnerable in terms of health.

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