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Social and Economic Implications of Population Aging in Kerala, India[t]

Introduction

THE aging of a population is defined in terms of the proportion of persons aged 60 and over in the total population. Although, concern about population aging has been quite prevalent in the developed countries, less developed countries have only in recent years started taking note of this problem because they expect the size of their older populations to grow thrice as rapidly as those of developed countries. This is as a consequence of their having had previous high fertility rates. A critical issue in the process of aging confronting less developed countries is the expectation that the older population will grow more than twice as rapidly as faster, as compared to the developed countries. This is due to larger cohorts that they have had in their high fertility regime. It is the absolute size even more than the proportion of older population to total population is of great concern both for demographers and social scientists in these countries.

The World Situation

There were 415 million persons aged 60 and over in the world in 1985 and they are projected to shift to 1.1 billion in the year 2000. According to the United Nations projections, the proportion of the total population in age group 60 and above is projected to jump from 15.8 per cent to 23.6 per cent in the developed countries and from 6.3 to 11.9 per cent in the developing countries before the end of this century. Even as it is the developing regions are currently estimated to account for 55 per cent of the world's elderly population. This share is projected to shift to more than 70 per cent over the next four decades, as a result of their decline in fertility and increase in life expectancy. If we take just the number of people above the age of 80, their numbers will jump from 15.2 million to 67.0 million, increasing nearly four fold by the year 2000 in the world. If we take the less developed countries alone then,

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the population of 60 years and older is expected to grow by 57 per cent but the group 70 years and older is projected to increase by 63 per cent, and that 80 and older by 82 per cent during the period 1985-2000. In contrast to the growth of older population, the total population of the less developed countries will grow by 32 per cent (United Nations 1987).

Aging Process in the Developing World

Today, the more developed countries of the world have undergone to become the aged society. But the issue of population aging is not related to the developed countries alone. Practically all developing countries also face the problem of population aging in absolute numbers, if not in terms of the total population. In the coming years between 1985-2025, the developing countries will face a colossal aging problem.

As it is well known that the death rates in developing countries fell too rapidly compared to their birth rates. Similarly, those developing countries that have experienced fertility decline in recent years are the ones that are now seen as aging too rapidly. It took the United States 45 years to double the proportion of old from 4 to 8 per cent. This same doubling process is occurring in Singapore in less than 15 years, virtually one third in time. In the next'40 years, between 1985-2025, a number of Asian countries will experience doubling of their older population.

Aging in South Asia

Taking South Asia as a region, as can be seen from Table 1, the proportion of the total population in the older ages is expected to change only slightly by the year 2000 due to presumed slow decline of fertility in these regions. However, the sheer numbers of elderly and the rate at which the aged population will rise dramatically, by 2025,17 Asian countries will have at least one million persons at the extreme old ages of 80 and above. Therefore, comparable attention will have to be paid both to the proportions as well as the absolute numbers, when talking about aging in these regions. Not only will the number of old people be increasing faster than those at all other ages, but it is the trend that will continue at an accelerating pace in the early 21st century which is of more concern.

TABLE 1 : AGING IN SOUTH ASIA

(Proportion of total population in older ages)

	South Asia		
	1985	*2000*	2025
60 years and older	5.5	6.8	10.0
70 years and over	1.9	2.4	3.7
Projected old age dependency	6.0	7.0	9.3

SOURCE: United Nations. Department of International Kconomic and Social Affairs, *Global Estimates ami Projections by sex and age: The 1984 Assessment.* New York,

Aging in India

Looking at the Indian sub-continent in the south Asia region, in 1981 there were 42.5 million people above the age of 60 years. In terms of percentage they constituted only 6.2 per cent of the total population. Though India currently ranks fourth among the countries of the world with a large elderly population but by the year 2000, it is likely to be second only to China. Although the proportion of the elderly is small compared with that of any developed country, because of the sheer size of India's population base, the elderly population is very large in absolute numbers. The number of the elderly persons who have completed 60 01 more years of age, was only 24.7 million in 1961, but it increased to 42.5 millions in 1981 and is expected to reach about 75.9 million in the year 2001. In other words, it will be more than three times the size of the elderly population in 1961 or would have doubled itself. In terms of proportions, in 1961, the elderly population comprised 5.6 per cent of the total, but increased to 6.2 per cent in 1981 and is likely to increase to 7.7 per cent by the year 2001, according to the Expert Committee on Population Projections for India. The Expert Committee has estimated that during the period 1981-2001, the increase in the elderly population would be around 1.2 per cent per year.

Within the Indian sub-continent, if we look at the inter-state differences in the proportion of the aged, we find that in no state the proportion of the aged is less than 5 per cent. The two states that already have more than 7 per cent of the population above the age of 60 years are Punjab and Kerala. Though the proportion of aged is same for both states, it was felt to undertake a study on population aspects of aging in Kerala because of its fairly advanced stage demographic transition (Bhat and Rajan 1990).

Table 2 gives an idea of how Kerala compares with other East and South Asian countries. It also shows the expected percentage change in the elderly population of selected countries from 1980 to 2025. Kerala population seems to follow very closely the pattern followed by China. Until the year 2000, the proportion of aged is the same. If we compare it with Pakistan, we find that Kerala's population is more than twice as fast. Even the aging process in India is much ahead of Pakistan.

TABLE 2 : EXPECTED PERCENTAGE CHANGE IN THE PROPORTION OF THE ELDERLY POPULATION OF KERALA AND SELECTED COUNTRIES

	Percentage			*Percentage change*	
Country	1980	2000	2025	1980-2000	2000-2025
Kerala	7.5	10.2	18.4	3.1	8.2
India	6 5	8 4	14 5	1 9	6 1
China	7.4	10.5	19.3	3.1	8.8
Japan	12.9	20.9	26.0	8.0	5.1
Pakistan	4.6	4.8	8.2	0.2	3.4

SOURCE: United Nations, 1986, *World Population Prospects: Estimates and Projections as Assessed in 1984* (ST/ESA/SER.A/98).

Kerala data refer to the years 2001 and 2006. SOURCE: Bhat, P. N. M. and S. Irudaya Rajan, 1989, *Population Projections for Kerala, 1986-2026.* Centre for Development Studies, Trivandrum, Kerala, India.

Kerala and China will fare the prospect of aging of their population almost at the same pace. Also China and Kerala will fare probably the fastest increase in the world in the proportion of their elderly population. Between the years 2000 and 2025, it may increase from a little above 10 per cent to about nearly 20 per cent in a period of 25 years. It took the United Kingdom about 60 years to reach this same increase and United States about 70 years. Even rapidly growing Japan will take about 30 years to reach a similar increase.

Population Aging in Kerala

The aging process of the population in Kerala differs from the experiences of other western countries in two major ways. One is the recentness of this process and second is the pace at which the increase is taking place for a long period. The age structure of the Kerala population remained virtually stable and the aging process did not begin with the initial decline of fertility and once the process begins, it is likely to proceed rapidly. It took the western countries a full century to increase their proportion of older people from 5 to 14 or 15 per cent. This increase will occur in Kerala in less than half that time. It is the sheer number and pace at which the population is aging which will lead to many changes in the society. It will raise'more questions about appropriate approach and problems and on attitudes, values and behaviour.

Proportion of the Older Population

The percentage of the Kerala population aged 60 years and over rose sharply within two decades from 5 per cent to 7 per cent. It is projected to reach around 10 per cent in 2001 and 18 per cent in 2026 on the basis of population projections done for Kerala for the period 1986-2026 (Bhat and Rajan, 1989). Table 3 sets out the proportion of population over the age of 60 years for India and Kerala and Table 4 shows the difference in the pace at which

TABLE 3: PROPORTION OF POPULATION ABOVE TOE AGE 60 IN KERALA AND INDIA

Year	*Kerala*	*India*
1901	4.3	5.1
1931	3.9	4.0
1961	5.9	5.6
1971	6.2	5.9
1981	7.5	6.2
1996	9.5	6.5
2001	10.2	7.7
2026	18.0	14.5

SOURCES: 1. Census of India 1971, Series 1 India, Paper 1 of 1979, *Report of the Expert Committee on Population.* New Delhi. Table 2, Page 11 and Table 9, Page 18.
2. 2001 to 2026 from Chanana and Talwar (1987).
3. Bhat, P. N. M. and S. Irudaya Rajan, 1989, *Population Projections for Kerala, 1986-2026.* Centre for Development Studies, Trivandrum, Kerala (mimeo.).

TABLE 4: PROPORTION OF POPULATION AGED 60 AND OVER WITH PERCENTAGE CHANGE FOR KERALA AND INDIA, 1961-81

	Kerala			*India*		
	1961	*1981*	*% change*	*1961*	*1981*	*% change*
Total	5.8	7.5	+29.0	5.6	6.5	+15.3
Men	6.0	7 9	+31.2	5.8	6.6	+13.4
Women	5.7	7.2	+26.5	5.5	6.4	+17.4

SOURCE: Same as in Table 3.

the population is aging. While the aged segment of the population is increasing both in the state as well as the country as a whole, its increase at the state level is taking place at an accelerated pace as can be seen from the Table 3.

The growth of elderly population in Kerala will be at an accelerated pace compared to the country as a whole. The rate of growth of older women is even more pronounced for Kerala indicating a faster growth of women at older ages as compared to India (Rajan 1989).

Factors Contributing to the Aging Process

Both fertility and mortality play a major role in the aging of a population but of the two fertility plays a very predominant role. Demographic analyses have shown that declining fertility is the most influential factor in the population aging process, with decreases in mortality playing a secondary role. Thus whether a state or a country has a youthful or aging population structure depends to a large extent on the degree to which it has made the transition from high to low levels of fertility.

TABLE 5: SOME FERTILITY INDICATORS FOR KERALA, 1971-1984

Year	*TFR*	*GRR*	*CBR*	*CDR*	*NIR*
1931-40			40.0	29.1	10.9
1941-50			39.8	22.3	17.5
1951-60			38.9	16.9	22.0
1968			33.2	10.0	23.2
1969			31.8	9.2	22.6
1970			31.6	9.2	22.4
1971	4.1	2.0	31.1	9.0	22.1
1972	4.2	2.1	31.2	9.2	23.0
1973	3.9	1.9	29.2	8.5	20.7
1974	3.3	1.6	26.8	7.8	19.0
1975	3.4	1.6	28.0	8.4	19.6
1976	3.4	1.7	27.8	8.1	18.7
1977	3.1	1.5	25.8	7.3	18.5
1978	3.0	1.5	25.2	7.0	18.0
1979	3.1	1.5	25.8	6.9	18.9
1980	3.1	1.5	26.8	7.0	19.8
1981	2.8	1.4	25.6	6.6	18.4
1982	2.7	1.3	26.2	6.6	19.6
1983	2.6	1.2	24.9	6.7	18.2
1984	2.6	1.3	22.9	6.2	16.7
1985	2.4	1.2	23.3	6.5	17.2
1986	2.3	1.2	22.5	6.1	16.4

SOURCE: Sample Registration System reports, 1971 to 1986.

Declines in fertility has the immediate effect of decreasing the population at younger ages and as a result increasing the population at older ages. Although decline in fertility is more important than the decline in mortality in the aging of the population, decline in mortality also plays an important role because of its impact on the expectation of life. Decline in mortality results in two things : (a) increase in the expectation of life at birth; and (b) extension of life at older ages. In other words, decline in mortality first in the younger ages and later in the older ages result in more people living longer to older ages. Then the aging of the population is inevitable, it is part and parcel of the demographic transition.

Decline in Fertility

As is widely known, Kerala has undergone a demographic transition since the middle sixties (for more details on this aspect, see Bhat and Rajan 1990). Since 1966 there has been a perceptible downward trend in the growth rate of population and is now continuing steadily. In 1984, the crude birth rate stood at 22.9 showing a decline of 17.1 percentage points since 1931-40. The death rate for the corresponding period also fell by nearly 23 percentage points. But the initial decline in the death rate was steep and preceded the fall in the birth rate. As a result of the fall in the birth rates, we find that the TFR also shows a declining trend from 4.1 to 2.4 and it is expected to remain stationary around 2.3, according to the projections made till 2026 (Bhat and Rajan 1989). Similarly the GRR decreases from 2.0 to 1.2 showing a decrease of 40 per cent.

Measures of the Aging Process

The aging process can be measured in a number of ways. Four measures of aging are presented in the materials which follow:

(a) Broad age structure, including age group 60 and above,
(b) Changes in the median age,
(c) Dependency ratio, including the aged dependency ratio,
(d) The index of aging.

Broad Age Structure

The demographic changes in the broad age structure for Kerala are given in Table 6. The demographic transition, particularly the fertility transition achieved in the late sixties produced a change in the age structure—a decline in the child population, an increase in the adult population of working age and a continuous increase of older persons. The percentage distribution of the three broad age groups changed considerably from 1981. In 1986, the child population formed only 32 per ce'nt and the working age population constituted 60 per cent. By the year 2026, according to the projections, the youth will constitute 22 per cent of the total population, the aged would be 18 per cent and those of working age is projected to remain constant at 60 per cent (Rajan 1989).

TABLE 6: COMPOSITION OF POPULATION BY BROAD AGE GROUPS BETWEEN 1901 -2026, KERALA

Year	Population (thousands)			Percentage		
	0-14	15-59	60+	0-14	15-59	60+
1901				37.62	33.30	4.32
1911	—	—	—	40.29	35.98	4.31
1921	—	—	—	40.83	36.79	4.04
1931	—	—	—	43..4S	39.63	3.82
1941	—	—	—	41.12	36.82	4.30
1951	—	—	—	40.36	35.44	4.92
1961	7205	8712	986	42.62	51.53	5.84
1971	8595	11425	1328	40.26	53.52	6.22
1981	8901	14643	1910	34.97	57.53	7.50
1986	8817	16661	2158	31.90	60.29	7.81
1991	8698	18490	2611	29.19	62.05	8.76
1996	8880	20166	3051	27.67	62.83	9.51
2001	9172	21759	3503	26.64	63.19	10.17
2006	9496	23252	3963	25.87	63.34	10.80
2011	9585	24675	4622	24.65	63.46	11.89
2016	9624	25705	5652	23.48	62.72	13.79
2021	9744	26421	6866	22.64	61.40	15.96
2026	9965	26752	8267	22.15	59.47	18.38

SOURCES: Census of India reports.
From 1986 to 2026, *Population Projections* Prepared by Man Bhal and S. Irudaya Rajan, Centre for Development Studies, Trivandmm.

Population of Working Ages

It is well known that aging of population is much more than just the increase in the proportion of the elderly. It is a process which involves a shift in the entire age distribution of the population resulting in changes in the size and age distribution of the working population. This, in turn, has several economic and social implications. The size of the labour force is determined by population in this working age group of 15 to 59 years. In Table 7, we present both the distribution of the population aged 15 and over for the years 1901 to 1981 and its projection for the period 1991 to 2026.

TABLE 7: AGE DISTRIBUTION OF THE POPULATION AGED 15 YEARS AND OVER 1901-2026

Year	Age distribution of the population aged 15+			
	15-39	40-59	60+	Total
1901	68.7	24.2	7.1	100
1911	68.8	24.1	7.1	100
1921	67.8	24.8	7.4	100
1931	68.9	24.2	6.9	100
1961	64.4	25.4	10.2	100
1971	64.3	25.6	10.4	100
1981	63.7	24.9	11.4	100
1991	63.3	24.3	12.4	100
2001	57.4	28.7	13.9	100
2011	49.9	24.3	15.8	100
2021	45.5	33.9	20.6	100
2026	44.1	32.3	23.6	100

SOURCE: *Demographic Report of Kerala, 1901-1961.*
Population projections for Kerala done by Mari Bhat and S. Irudaya Rajan, Centre for Development Studies, Trivandrum, Kerala, India.

Between 1901 and 1981, the proportion of the population aged 60 and above as a proportion of the population aged 15 and over increased from 7.1 per cent to 11.4 per cent. In the subsequent 45 years, it is likely to be more than double. Dividing the working age population into two subgroups, in order to account for the heterogeneity, there can be noticed consistent trend of change in the proportion of population in the age groups 15-39 and 40-59. In the first subgroup, the proportion is declining throughout; from 1901-1981, it declined from 68.7 per cent to 63.7 per cent; thereafter it is expected to come down sharply and reach 44.1 per cent in 2026. In the second subgroup of 40-59, the trend is more or less stable between 1901 and 1991. But thereafter it is expected to register a noticeable increase. The major shifts in the distribution of the working age population, as can be seen, will take place only after the year 2001.

Labour Force Participation

To analyze the effect of the changing pattern of the age distribution on labour force, considerations should be given first to the overall work participation patterns which also influence the size and age distribution of the labour force.

TABLE 8: WORK PARTICIPATION BY SEX AND AGE GROUP, KERALA, 1981

Age Group	*Total*	*Men*	*Women*
0-14	1.1	1.1	1.0
15-39	45.3	65.5	25.2
40-59	60.1	89.9	18.4
60+	28.3	48.9	10.0

SOURCE: Census of India, 1981.

Work participation rates, it can be seen differ markedly between the sexes and for those aged 15 and over. The difference is the greatest for 40-59 age group. Male rates are the highest in the age groups 40-59 years. For women, this is so for the age group 15-39. In that age group, as many as one quarter of women are engaged in economic activities. Among the aged, while almost half the men are engaged in work, only 10 per cent of the women are currently working, with the overall work participation rates working out to be 28.3 per cent which is less than half the rate of 60.1 per cent for the age group 40-59. Even after the age of 60, nearly half of the men are reported working.

Median Age

The median age is expected to rise from 19.4 in 1961 to 28.8 in the year 2000 and reach 34.9 years in 2026, indicating a decreasing youthfulness of the Kcrala population.

Dependency Ratio

In 1961, there were 94 dependents, the young and the old combined, for each 100 persons of working age. Of these 82.7 were young dependents and 113 were old dependents. In 1981, after fertility had declined and the aging process had begun, there were 74.7 total dcpendenlsof whom 61.5 were young and 13.2 were old. Between 1961-81, the youth dependency ratio had

decreased by 34.16 per cent, aged dependency had increased by 14.18 per cent and total dependency ratio had decreased by 25.93 per cent Table 9 sets out the past and estimated total dependency ratios, aged dependency ratios and the index for aging for Kerala.

TABLE 9: DEPENDENCY RATIO AND INDEX OF AGING FOR KERALA 1961 TO 2026.

Year	*Dependency ratio*			*Index of Aging*	*Median*
	Young 0-14 /15-59	Aged 60+ /15-59	Total 0-14+60+/15-59	60+/0-14	Age
1961	82.71	11.32	94.03	13.69	19.35
1971	75.23	11.62	86.85	15.45	19.45
1981	61.48	13.19	74.67	21.46	21.56
1986	52.92	12.95	65.87	24.48	23.49
1991	47.04	14.12	61.16	30.02	25.42
1996	44.03	15.13	59.16	34.36	27.20
2001	42.15	16.10	58.25	38.19	28.84
2006	40.84	17.04	57.88	41.73	30.39
2011	38.84	18.73	57.58	48.22	31.79
2016	37.44	21.99	59.43	58.73	33.05
2021	36.35	25.99	62.34	71.49	34.08
2026	37.25	30.90	68.15	82.96	34.88

SOURCES: From 1961 -81, Census of India reports
From 1986 to 2026, *Population Projections* prepared by Mari Bhat and S. Irudaya Rajan, Centre for Development Studies, Trivandrum.

With the continuation of the aging process, according to the population projections, total dependency ratio by 2000 would come down to 58.3 with youth dependency ratio virtually half of what was in 1961 and aged dependency ratio would be 16.1. By the year 2026, the number of aged dependents would be more than twice of what it was in 1961 and the youth dependency ratio would be half of what it was in 1961. The overall dependency ratio would have come down from 94.0 to 68.2 during the period under investigation. In this context, we present dependency ratios, index for aging for India, China and Japan along with India in Table 10.

TABLE 10: DEPENDENCY RATIOS AND INDEX OF AGING FOR SELECTED COUNTRIES, 1980-2025

Country	*Total Dependency Ratio*			*Aged Dependency Ratio*			*.Index of Aging*		
	(0-14)+(60+)/(15-59)*100			(60+)/(15-59) 100*			(60+)/(0-14)		
	1980	2000	2025	1980	2000	2025	1980	2000	2025
Kerala	75	58	68	13	16	31	21	38	82
India	82	64	53	9	11	18	17	28	68
China	72	53	62	14	16	31	21	44	99
Japan	57	64	77	20	34	45	55	114	144

The above table shows the esumated and projected total dependency ratios, aged dependency ratios and the index of aging of for Kerala, India, China and Japan. It can be observed from the table that the total dependency ratio, the percentage of those 60 or more

years of age and those 0-14 years of age will decrease. During the period 1980-2000, the proportion of elderly in the population will increase, while the proportion of those aged 0-14 years will decrease. This can be seen clearly by the index of aging (the percentage of those 60 and more years of age to those in the 0-14 age group). It also seems that the pattern of total dependency of Kerala and China are very similar. The old age dependency ratio, the ratio of those 60 or more years of age to those aged 15-59 years, changes only slightly between 1980 and 2000 in China. But from the year 2000 to 2025, the ratio for China almost doubles from 16 to 31. By 2025, the index of aging is expected to be 99, by then the proportion of the elderly and youth under 15 years of age will be almost equal.

Aging Index

In 1961, when the crude birth rate was 34.4, the proportion of persons over 60 and above was 5.9 and the proportion of the young was 42.6 per cent, the aging index was 13.7. By 1981, the index has risen to 21.5, as the proportion of aged had risen to 7.5 per cent while the proportion of young had declined to 31 per cent. By the year 2026, the index will have soared to 83; as the proportion of the aged reaches 18.4 per cent and the proportion of young falls to 22.2 per cent.

Implications of Aging

Extension of Life in Kerala

One of the implications of the aging of a population is the extension of life. One measure of this increase is by looking at the expectation of life at various ages. At one time an expectation of life of twenty to thirty years was fairly common in all parts of the world.

The increase in the expectation of life follows more with the reduction in mortality than the decline in fertility. Expectation of life at birth stood at 25.5 years for males and 27.4 years for females for the period 1911-20. By 1983 Kerala's death rate had declined to 6.2 and the expectation of life at birth for males had risen to 66.0 years and that for females soared to 71.8 years. Thus between 1911-83, the life expectancy for males had increased by 40 years and that of females had risen by 44 years. The gap between male and female life expectancy had risen over the period from 2 years to 5 years between 1911 to) 984. Needless to say, the extension of life has important implications for the person and for society.

Increase in the Expectation of Life and its Implications for the Aged Population

The aging in this context connotes the increase in the expectation of life. Table 11 indicates the expected length of retired period a person would live at selected ages. The expectation of life at age 60 has increased from 6.9 years to 17.1 years for men and 8.4 to 18.3 for women (1986-1990). In the coming years 2016-2020, it will further increase to 20.7 for men and 22.3 for women. In terms of an economic life cycle model, this implies that the time horizon of life time allocation of consumption and earnings is altered so that the adjustment of expectations will be required in the course of one's life. For

instance, one would want to work longer in life and retire later to acquire enough life time earnings so as to save more by the age of retirement tr meet future consumption.

TABLE 11: ABRIDGED LIFE TABLE FOR KERALA FOR THE DECADES BETWEEN 1911-2020

Year	*Males*			*Female*		
	eO	*e30*	*e60*	*eO*	*e30*	*e60*
1911-20	25.5	20.0	6.9	27.4	20.8	8.4
1921-30	29.5	22.7	8.6	32.7	23.1	9.0
1951-60	46.2	30.2	10.9	50.0	34.0	14.3
1986-90*	68.6	42.4	17.1	72.9	45.1	18.3
2006-10*	75.3	47.0	19.7	78.7	49.8	21.4
2016-20*	76.6	48.3	20.7	79.6	50.7	22.3

SOURCES: *Population Growth in Kerala,Its implications, 1965.Bureau of Economics andStatistics,Govt.of Kerala.* * From 1986 to 2020, comes from '.he *Population projections* for Kerala done at CDS by Man Bhat and S. Imdaya Rajan.

Implications for the Family

With the improved chances of survival of the old on the one hand and of the children on the other, the distribution of time and resources in the care and support of the elderly does pose serious problems for families for different choices. So far as the old are concerned, at the family level, fewer children would be available to support parents who would live considerably longer than in the past. Since parents are likely to make greater investment on fewer children, precisely with the expectation that they would be looked after better in their old age. In reality their expectation may not be met. One of the important implications for the family and the society is reduced fertility and greater longevity increase the relative number of economically inactive aging persons to be supported by the working population.

Marital Status among Aged

One of the features of concern of the older population is the large proportion of widowed elderly women. Table 12 gives the marital status among men and women both for India and Kerala. From the table, we find that the incidence of widowhood is highest for all age groups of the elderly in India and Kerala. We also find that the male widowhood rates are twice as high as that of Kerala. For females, it is much lower except in the age groups 65-69 and 70 and above. This is because the expectation of life of women in India is much lower than that of men while that is not so in Kerala. The incidence of divorce and separation seems to be negligible in the country as a whole and moreover there is not much male female differences. However the Kerala rates for divorce and separation are higher and its frequency seems to be much higher among females indicating greater loneliness and lack of economic support among aged.

TABLE 12: PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, SEX AND MAKITAL STATUS IN INDIA AND KERALA, 1981

Age Group		*Kerala*			*India*		
		C	*W*	*DIS*	C	*W*	*DIS*
All ages	Male	37.0	1.1 9.1	0.2 1.4	42.0	2.4	0.2
	Female	38.7			45.8	8.0	0.4
60-64	Male	90.8	6.0	1.0	83.4	14.1	0.4
	Female	42.6	52.3	2.2	43.1	56.1	0.5
65-69	Male	87.82	8.9	1.0	80.3	17.2	0.4
	Female	33.0	63.0	1.6	40.6	58.6	0.4
70+	Male	77.9	19.1	1.1	70.4	27.0	0.4
	Female	16.7	80.7	1.0	21.7	77.6	0.3

Notes: C: Currently married; *W:* widowed; *D:* divorced or separated.

SOURCE: *Women in India, A Statistical Profile 1988;* Government of India, New Delhi; *Census of India,* 1981.

The three main reasons for a greater incidence of widowhood among women and men are due to: (a) substantial age difference between marriage partners because differences in the ages at which men and women marry have profound effects on duration of married life and the likelihood of widowhood; (b) the differential life expectancy between males and females, and (c) the differing proportion of old men and women who remarry.

Adequate Income Flows

Of all the factors essential to good adjustment in old age none is more important than the maintenance of adequate income flows. Most parents of today take it for granted that economic security in old age would be provided by the family. However to be realistic one cannot expect this to continue and one should anticipate problems in the coming years. Although it cannot be assumed that western experience will necessarily follow in India, it is important to realize that future demographic changes with the increasing proportion of older members will exert great pressure on traditional family relationships. The three factors which will pose problems are: (a) the ability of families to support dependents as the nature of dependency shifts from young to the old, (b) the implication for the state to meet pension schemes for the labour force both in the formal as well as in the informal sector, and (c) appropriate health care systems.

One of the main problems that families will face is the ability of families to support dependents as the nature of dependency shifts from young to old. The support of the non working population particularly the elderly differs according to the social and economic development of a society. In agrarian economies the family is the main support for older members. In the capitalist stage while the family continues to support the aged the aged live on their own savings. In the third stage the burden of caring for the elderly is shifted to the state. Support of the elderly depends not only on what is socially possible but also on what is financially and administratively feasible in a particular country.

Economic Status of the Elderly

The vast majority of elderly in Kerala do not have any independent means of support except when they had a pensionable job. Those who were involved in agriculture or casual wage labour had access to income only during their working life. Even those with regular but non-pensionable jobs during their working life were in the same category. Once they ceased working, they become totally dependent on their children or relatives for support. As a result, we find that the aged continue to work much beyond what is normally regarded as working age.

In 1981 work participation rates for those above 60 show 43 per cent. It means they were still actively involved in work. This could be principally due to the fact that elderly parents in low income families can depend little on their children for economic support. Thus, while in India, over 70 per cent of rural males over 65 are engaged in work, the corresponding proportion is only 19 per cent in the United States of America. In the less developed regions of the world, nearly 50 per cent of men and 15 per cent of the women continue to work beyond the age of 65 as compared to 21 and 7 per cent respectively in the more developed regions.

Elderly in Low Income Households

On the basis of studies done in the low income nouseholds, new nuclear family formation virtually takes place the moment a member is married. Even if there is a constraint for space, people start separate cooking arrangements soon after marriage signifying the formation of a new household. Because of the casual and intermittent access to work, these new households cannot shoulder the responsibility beyond the nuclear family. This is particularly true of the households who have no assets and are living below the poverty line (Gulati 1984).

The arrangements for the elderly here is usually a pooled arrangement. All the working members of the family, male and female, contribute towards the support of their elderly non-working parents. This is because of the deep rooted idea that taking care of the parents in their old age is the responsibility of the children. This is irrespective of whether or not any inter-generational transfer in terms of money, or assets has taken place. However, since female members in low income households depend more on their parents for emotional support to the instability in their married lives, it is not uncommon to come across young working women becoming responsible for the care of the elderly in addition to their own young dependents. In reality, daughters rather than sons often are found coming to the rescue of old parents though they got much less share from parents when they were young.

Current Welfare Programmes for the Aged in Kerala

Until recent years when the state government did accept responsibility for the aged it was restricted to those who have no family to help them or those abandoned by relatives and those destitute. In 1980,16 out of the 22 major Indian states, including Kerala had pension scheme of this type. As far as the working population is concerned only apart of the working

population is protected by either pension or provident schemes as elsewhere in the country. All employees of the organized sector undertakings enjoy some form of old age benefits. To date, there are two lakhs pensioners in the state receiving 190 crores as pension every year.

There were in all 7.8 million workers in Kerala in 198 1 . Of these 6.8 million were main workers and 0.98 million marginal workers. Of the 6.8 million main workers 1.1 million workers were in the organized sector who were distributed between the private and public sector in the ratio of 53 and 47 per cent. While all of those employed in the organized sector are entitled to some benefit of one kind or the other. The rest of the workers (5.7 million) are totally uncovered for protection. For these workers, we have to turn to what is being attempted by the state for workers in the unorganized sector of the state's economy.

Kerala Agricultural Worker's Pension Scheme, 1980

Kerala is the first Indian state to initiate payment of cash benefit to agricultural workers. The largest single category of workers in the unorganized sector are the agricultural workers. In this context it is interesting to note that only few countries among the developing nations have initiated a pension for agricultural worker. The data are presented in Table 13.

TABLE 13: PERCENTAGE OF THIRD WORLD NATIONS AND PENSION FOR AGRICULTURAL WORKERS

Country	*Provided*	*Not Provided*	*Unknown*	*Total*
Africa	17	*62*	21	100
Central and South America	45	50	5	100
Asia	30	28	42	100

SOURCE: *Social Security Scheme throughout the World,* 1985, U.S. Report.

In Kerala, under this scheme an agricultural worker who completes 60 years of age and has income less than Rs. 1500 per annum is entitled to Rs. 60 per month. There are in all 22 million agricultural workers. The expenditure under this scheme amounted to Rs. 164 million in 1987 and the number of beneficiaries was 2,61,584. This works out to be 11.4 per cent of the estimated agricultural workers in the state. This is quite close to the overall old age dependency ratio which in 1981 is 13.2 (Gulati 1990). The proportion of beneficiaries under the pension scheme addressing the agricultural workers would appear to be quite comprehensive. The pension entitlement is barely enough to buy the very basic necessities of living. The present pension rate amounts to two days of the current wage rate. By making this modest provision, the government envisages to give the elderly person a certain independence. The modest public old age pension may lead families to value the elderly more highly. The present pension entitlement enables a worker to buy his basic food requirement from the public distribution system and a small cash over and above. Other contributory welfare schemes have been set up for other workers in the unorganized sector.

Policy Implications on Family

(a) For any realistic policy with regard to the care of the elderly it is necessary to find out how family as an institution, can be supported and strengthened. No other alternative arrangement will be more financially viable or more acceptable to the old. Therefore it becomes necessary to address the issue of the family as a focal point of policy.

(b) Programmes should be designed to support families in their supportive role, and functions towards the elderly rather than substitute it with government services. In order to achieve this, families could be supported, in the discharge of this role and functions. This perspective is also consistent with reinforcing the family as the principal social institution for close interaction between its members young, not so young and old.

(c) Government should have a conscious policy of promoting the social policies and encouraging the maintenance of family solidarity among generations.

(d) Support should be provided to various family types as well as classes of families. Support may naturally have to be different in type as well as magnitude, depending on the economic and educational levels of the family.

(e) For those families who are below the poverty line, the caring for the elderly is virtually impossible on economic group alone. Pension schemes for both men and women in these families will go a long way in easing the situation. Often with the provision of additional resources such as food, cash and counselling, families can function more effectively.

(f) Since cultivation offers maximum opportunities for work, effort should be made to see that all elderly have some access to cultivable land.

(g) There should be a cross country analysis of policies and programmes affecting the aged in the family and this should be a high priority for research in the coming years.

Conclusion

Kerala's demographic contours suggest quite a steep rise in the elderly population in the coming decades as a result of declining fertility, increasing expectation of life at birth and at later ages. The growth rate of the old population will be much faster than the general population. And this rate is expected to increase steeply after the year 2000. The concentration of the elderly will be more in the rural areas and women will outnumber men. We will also find a large number of widows among the women. In the coming years there will be a decline in the dependency ratio of the young and this will shift in favour of the old. This will mean greater emotional and economic strain on the working population. The future elderly, both men and women, are likely to be literate but not participating in work. These phenomena coupled with rapid social changes resulting in the gradual whittling down of the traditional family system are likely to pose serious problems for the elderly.

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