POPULATION AGEING AND HEALTH IN INDIA

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The Centre for Enquiry into Health and Allied Themes (CEHAT), Mumbai

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FROM THE RESEARCH DESK

Health and Human rights has explicit intrinsic connections and has emerged as powerful concepts within the rights based approach especially so in the backdrop of weakening public health system, unregulated growth of the private sector and restricted access to healthcare systems leading to a near-total eclipse of availability and accessibility of universal and comprehensive healthcare. A rights-based approach to health uses International Human Rights treaties and norms to hold governments accountable for their obligations under the treaties. It recognises the fact that the right to health is a fundamental right of every human being and it implies the enjoyment of the highest attainable standard of health and that it is one of the fundamental rights of every human being and that governments have a responsibility for the health of their people which can be fulfilled only through the provision of adequate health and social measures. It gets integrated into research, advocacy strategies and tools, including monitoring; community education and mobilisation; litigation and policy formulation.

Right to the highest attainable standard is encapsulated in Article 12 of the International Covenant on Economic, Social and Cultural Rights. It covers the underlying preconditions necessary for health and also the provisions of medical care. The critical component within the right to health philosophy is its realisation. CEHAT's main objective of the project, *Establishing Health as a Human Right* is to propel within the civil society and the public domain, the movement towards realisation of the right to healthcare as a fundamental right through research and documentation, advocacy, lobbying, campaigns, awareness and education activities.

The Background Series is a collection of papers on various issues related to right to health, i.e., the vulnerable groups,health systems, health policies, affecting accessibility and provisions of healthcare in India. In this series, there are papers on women, elderly, migrants, disabled, adolescents and homosexuals. The papers are well researched and provide evidence based recommendations for improving access and reducing barriers to health and healthcare alongside addressing discrmination.

We would like to use this space to express our gratitude towards the authors who have contributed to the project by sharing their ideas and knowledge through their respective papers in the Background Series. We would like to thank the Programme Development Committee (PDC) of CEHAT, for playing such a significant role in providing valuable inputs to each paper. We appreciate and recognise the efforts of the project team members who have worked tirelessly towards the success of the project ; the Coordinator, Ms. Padma Deosthali for her support and the Ford Foundation, Oxfam- Novib and Rangoonwala Trust for supporting such an initiative. We are also grateful to several others who have offered us technical support, Ms Sudha Raghavendran for editing and Satyam Printers for printing the publication. We hope that through this series we are able to present the health issues and concerns of the vulnerable groups in India and that the series would be useful for those directly working on the rights issues related to health and other areas.

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Population Ageing and Health in India

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I. INTRODUCTION

Projected increases in both the absolute and relative size of the elderly population in many third world countries is a subject of growing concern for public policy (Kinsella and Velkoff 2001; World Bank 2001; United Nations 2002; Bordia and Bhardwaj 2003; Liebig and Irudaya Rajan 2003). The combination of high fertility and declining mortality during the twentieth century has resulted in large and rapid increases in elderly populations as successively larger cohorts step into old age. Further, the sharp decline in fertility experienced in recent times is bound to lead to an increasing proportion of the elderly in the future. Since these demographic changes have been accompanied by rapid and profound socio-economic changes, cohorts might differ in their experience as they join the ranks of the elderly.

The number of elderly in the developing countries has been growing at a phenomenal rate; in 1990 the population of 60 years and above in the developing countries exceeded that in the developed countries. According to present indications, most of this growth will take place in developing countries and over half of it will be in Asia, with the two major population giants of Asia, namely India (Irudaya Rajan, Mishra and Sarma 1999) and China contributing a significant proportion of this growing elderly (Irudaya Rajan, Sarma and Mishra 2003).

II. Ageing: The Indian Scenario

The 2001 census has shown that the elderly population of India accounted for 77 million. While the elderly constituted only 24 million in 1961, it increased to 43 million in 1981 and to 57 million in 1991. The proportion of elderly persons in the population of India rose from 5.63 per cent in 1961 to 6.58 per cent in 1991 (Irudaya Rajan, Mishra and Sarma, 1999) and to 7.5 per cent in 2001. This is true of other older age cohorts too. The elderly population aged 70 and above which was only 8 million in 1961 rose to 21 million in 1991 and to 29 million in 2001. Besides, the proportion of elderly above 70 in the total population increased from 2.0 per cent in 1961 to 2.9 per cent in 2001. The Indian population census reported 99,000 centenarians in 1961 their number rose to 138,000 in 1991. The growth rate among different cohorts of elderly such as 60 plus, 70 plus and 80 plus during the decade 1991-2001 was much higher than the general population growth rate of 2 per cent per annum during the same period. However, the sex ratio among the elderly in India has favoured males as against the trend prevalent in other parts of the world (Tables 1 and 2).

Table 1: Number and Proportion of Elderly in the Indian Population by Age Groups, 1961-2001

	Number (in Millions)					*Percent of Elderly to the total population*				
	1961	1971	1981	1991	2001	1961	1971	1981	1991	2001
60+	25	33	43	57	77	5.6	6	6.49	6.76	7.5
70+	9	11	15	21	29	2	2.1	2.33	2.51	2.9
80+	2	3	4	6	8	0.6	0.6	0.62	0.76	0.8
90+	0.5	0.7	0.7	1	n.a	0.1	0.1	0.1	0.2	n.a
100+	0.01	0.01	0.01	0.01	n.a	0.02	0.02	0.02	0.02	n.a

Note: Compiled by the author from the last five population censuses.

Table 2: Sex Ratio and Growth Rate among the Indian Elderly, 1971-2001

	Sex Ratio of Elderly (males per 1000 females)				*Growth of Elderly (Percent)*		
	1971	1981	1991	2001	1971-81	1981-91	1991-2001
60+	1066	1042	1075	1028	2.78	2.72	3.04
70+	1030	1026	1084	991	3.13	3.08	3.32
80+	950	990	1090	1051	2.54	4.35	2.35
90+	897	892	1019	n.a	0.66	5.08	n.a
100+	798	844	896	n.a	0.19	0.44	n.a

Note: Estimated by the author from the last four censuses.

India is one of the few countries in the world where males outnumber females. This phenomenon among the elderly is intriguing because female life expectancy at ages 60 and 70 is slightly higher than that of males. However, at any given age, contrary to what we would normally expect, there are more widows than widowers and reasons for this unusual phenomenon need to be identified. Life expectancy at birth among Indian males had been higher than that among females until the first half of the 1990s. Apart from this unusual demographic pattern of excess female mortality during infancy and childhood, the phenomenon of age exaggeration among the aged complicates the analysis. Thus, the above observation of more males in old age does not reveal a true picture of elderly persons (Irudaya Rajan, Sarma and Mishra 2003). In India, the sex ratio of the aged as well as that of the old-old favours males. Reasons for more males in old age may consist of under-reporting of females, especially widows, age exaggeration, low female life expectancy at birth, and excess female mortality among infants, children and adults (Sudha and Irudaya Rajan 2003; Mari Bhat 2002). Notwithstanding the several analytical and statistical problems indicated above, the preponderance of females in extreme old ages needs to be brought to the attention of planners and policy makers.

Available findings on ageing suggest that fertility has played a predominant role in the ageing process compared to mortality. In India, there has been a substantial reduction in mortality compared to fertility

Table 3: Life Expectancy at ages 60 and 70 for Indians

	Male			*Female*		
	e0	e60	e70	e0	e60	e70
1970-75	50.5	13.4	8.6	49	14.3	9.2
1976-80	52.5	14.1	9.6	52.1	15.9	10.9
1981-85	55.4	14.6	9.7	55.7	16.4	11
1986-90	57.7	14.7	9.4	58.1	16.1	10.1
1991-95	59.7	15.3	10	60.9	17.1	11
1995-99	60.8	15.7	10.3	62.5	17.7	11.6

Note: Compiled from life tables produced by the Registrar General of India for various periods.

since 1950. For instance, while the crude birth rate declined from 47.3 during 1951-61 to 22.8 in 1999, the crude death rate fell steeply from 28.5 to 8.4 during the same period. Logically, therefore, India is expected to undergo a faster decline in fertility in the immediate future compared to mortality, because mortality is already at a low level. The ageing process in India will, therefore, be faster than in other developing countries. Moreover, the transition from high to low fertility is expected to narrow the age structure at its base and broaden the same at the top. In addition, improvement in life expectancy at all ages will allow more old people to survive, thus intensifying the ageing process. In this context, an examination of the increasing life expectancy indicates that the gain will be shared by older people and will increase their longevity. Table 3 provides evidence to support this—males are expected to live 16 years beyond age 60 and 10 years beyond age 70 and the corresponding years for females are 18 and 11 respectively. Urban females are expected to live for an additional two years at age 60 compared to their rural counterparts.

III. Emerging Ageing Scenario, 2001-2051

The major objective of this paper is to assess the emerging ageing scenario of India in the first half of the 21st century and for this, the elderly population of India has been projected for the next 50 years. Table 4 gives a profile of the elderly classified by ages 60 and above, 70 and above and 80 and above in terms of size, proportion and gender dimensions. Figure 1 depicts India's age pyramids at three demographic regimes—high fertility and mortality (1961), moderate fertility and low mortality (2001), and low fertility and low mortality (2051). Figure 2 assesses the percentage of elderly in the population by sex.

For the projections, the 2001 census age data published by the Registrar General of India has been used as the base population; assumptions on future fertility and mortality trends are based on past trends as revealed by the Sample Registration System and other sources such as the first and second round of National Family Health Surveys (Visaria and Irudaya Rajan 1999; Guilmoto and Irudaya Rajan 2001; 2002). The projection period ranges from

Table 4: Number, Proportion and Sex Ratio of the Elderly, 2001-2051

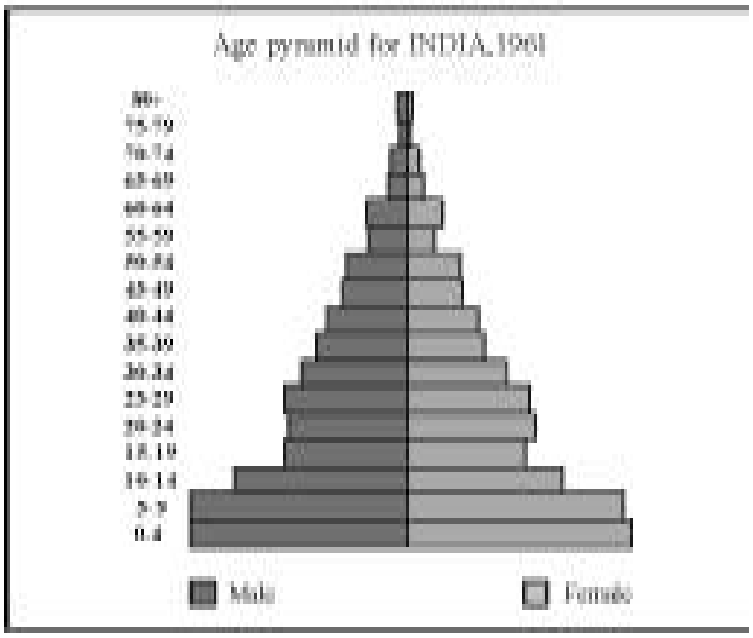
	2001	*2011*	*2021*	*2031*	*2041*	*2051*
60 and Above						
Numbers (in million)	77	96	133	179	236	301
Percentage to the total population	7.5	8.2	9.9	11.9	14.5	17.3
Sex Ratio (males per 1000 females)	1028	1034	1004	964	1008	1007
70 and Above						
Numbers (in million)	29	36	51	73	98	132
Percentage to the total population	2.9	3.1	3.8	4.8	6	7.6
Sex Ratio (males per 1000 females)	991	966	970	930	891	954
80 and Above						
Numbers (in million)	8	9	11	16	23	32
Percentage to the total population	0.5	0.7	0.8	1	1.4	1.8
Sex Ratio (males per 1000 females)	1051	884	866	843	774	732

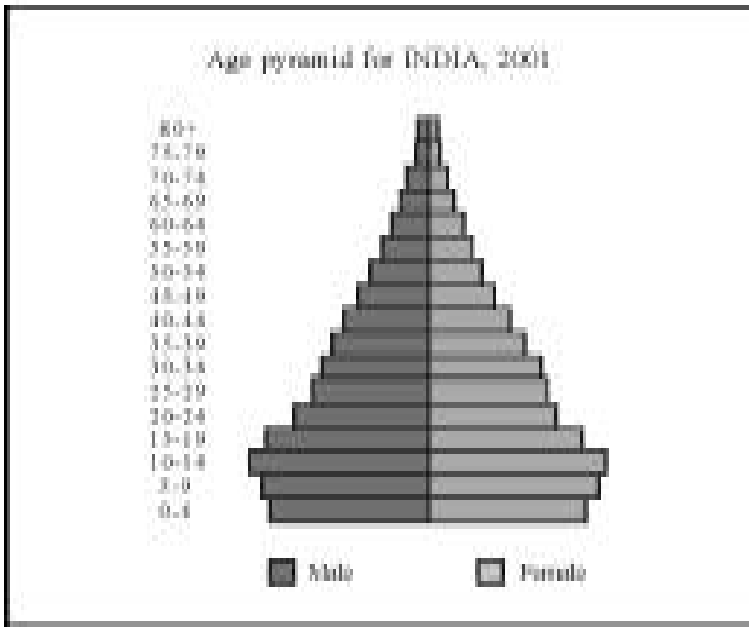
Note: According to the 2001 census, India was administratively divided into 28 states and 7 Union Territories. Population Projections have been made specifically for the present paper.

2001 to 2051. It is also important to note that projected elderly population above 60 years of age in 2051 were already born in 1991 and were 10 years old in 2001. Given our assumptions regarding mortality, the projections are likely to be valid.

The size of India's elderly population aged 60 and above is expected to increase from 77 million in 2001 to 179 million in 2031 and further to 301 million in 2051. The proportion is likely to reach 12 per cent in 2031 and 17 per cent in 2051. However, the sex ratio among the elderly favours males, which is contrary to the experience of other developing nations. The number of elderly persons above 70 years of age (old-old) is likely to increase more sharply than those 60 years and above. The old-old are projected to increase five-fold between 2001-2051 (from 29 million in 2001 to 132 million in 2051). Their proportion is expected to rise from 2.9 to 7.6 per cent. Although we have found excess males in the age group 60 and above, the old-old sex ratio is favourable to females. The oldest old (80+) among the elderly in India is expected to grow faster than any other age group in the population. In absolute terms, it is likely to increase four-fold from 8 million in 2001 to 32 million in 2051.

Figure 1





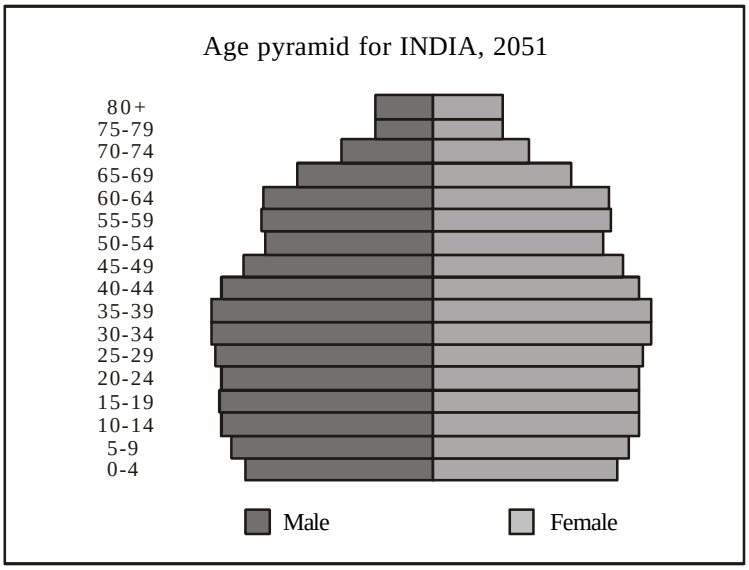
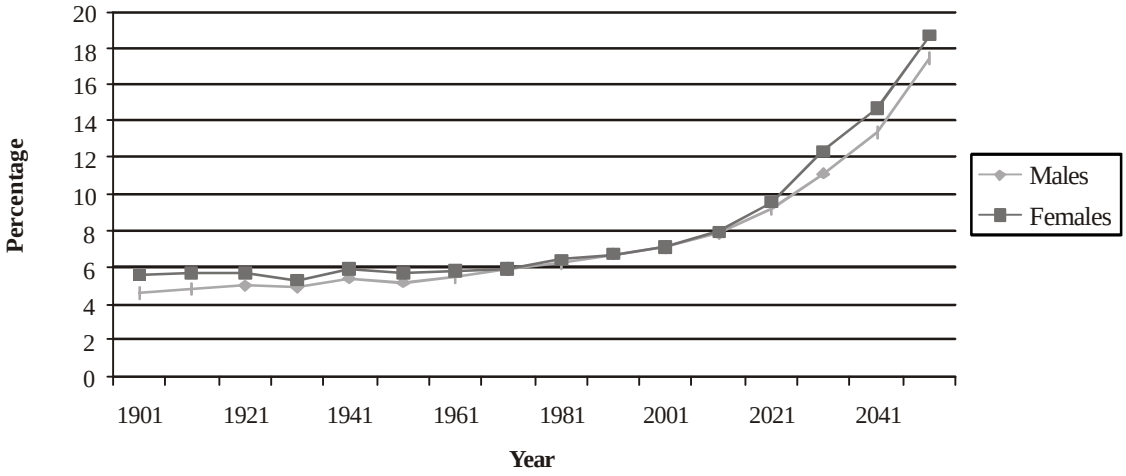


Figure 2: Percentage of Elderly 60 and Above by Sex, 1901-2051



IV. Marital Status of the Elderly

The marital status of the elderly assumes special significance in the context of care in old age as those who are married seem to fare better in all economic and social aspects than those who are single. A major concern relates to the increasing proportion of elderly women, especially widows in the population. Two reasons are given for the marked gender disparity in widowhood in India

(i) longer life span of women compared to men,
(ii) the general tendency for women to marry men older than themselves (Gulati and Irudaya Rajan 1999).

Besides, widowed men are more likely to remarry and thus restore their earlier status. Though the relationship between the well-being of the elderly and their marital status cannot be spelt out precisely, any change in the marital status of the elderly deserves careful examination.

According to the 2001 census, 33.07 per cent of the elderly in India are without their life partners. The widowers among men form 14.98 per cent as against 50.06 per cent widows among women. However, the proportion of widows and widowers in the 1991 census were 15.5 per cent and 54.0 per cent respectively. Over the last ten years, the widowhood percentages have declined for both sexes; however, the decline has been more marked among women. Among the oldest-old (80 years and above), widowhood is much more common. Almost half of them live without the spouse. A gender-wise analysis of the latest population census shows that 71.11 per cent of women were widows, while only 28.89 per cent of males were widowers. Loss of spouse is a major disaster in old age and such individuals deserve suitable and adequate social safety nets irrespective of gender. Designing policies to protect elderly females, particularly widows, should form a major welfare programme in the country.

V. Living Arrangements among the Elderly

The overall reduction in general and infant mortality rates and the steady increase in average age at death have resulted in the growth of the elderly population around the world. According to the National Family Health Survey-2, eight per cent of the population reported that they were in the age group 60 or above (International Institute for Population and Sciences, 2000). The conventional living patterns among the elderly have changed drastically following the reduction in fertility and the increase in life expectancy at older ages. In India, the traditional practice has been for people to live with their children in old age; this is not necessarily with the intention of receiving support; often the rest of the family also benefits from the arrangement. For example, when the younger women of the household go to work, the grandparents take care of their children. On the International Day for the Older Persons, (2003), the United Nations (2003) addressed healthy older people as a resource for their families, societies and the economy of their respective countries.

The term 'living arrangement' is used to refer to one's household structure (Palloni, 2001). Irudaya Rajan, Mishra and Sarma (1995) explain living arrangements in terms of the type of family in which the elderly live, the headship they enjoy, the place they stay in and the people they stay with, the kind of relationship they maintain

with their kith and kin, and the extent to which they adjust to the changing environment. While dealing with the welfare of any specific group, it is important to study their pattern of living arrangement. The elderly, being less independent, need the care and support of others in several respects. Taking care of the elderly refers mainly to emotional support; on the other hand, support given to the elderly refers to financial and material support. The former type of support is expected from family members or persons who are close to them, whereas, the latter is supposed to be a joint effort of the immediate family and society.

There exist several living patterns for the elderly such as living with the spouse, living with children and living in old age homes. Living alone or with the spouse is the most stable living arrangement for people who are not too old yet, whereas for the oldest-old, living with a child or grandchild is the most stable arrangement (Wilmoth, 1998). Researchers have put in a lot of effort to investigate the determinants leading to a specific living arrangement. Living arrangements are influenced by a variety of factors including number and availability of children and other relatives, kinship patterns of society, location of household, marital status, financial status, availability of services and physical and mental well being of the elderly (Schafer,1999; Kan, Park and Chang, 2001). Attitude towards and perception about the living place is another important component that decides where they should live (Chen, 1998).

The effects of living arrangement on the physical and psychological well-being of the elderly have also been examined by researchers. According to them, changes in living arrangements, family structure and mode of retirement affect the old adversely (D'Souza, 1989). Leaving the parental home for education and employment results in elderly parents having to live alone at home until the children come back (Gaymu, 2003). The overall well-being of the elderly consists of their physical, mental and social well-being. It is widely known that the erosion of the traditional norm whereby the elderly generally live with children or relatives reduces the well-being of the older population (Palloni, 2001). However, that it is not necessarily so is shown by the experience of industrialised nations where the government has fostered systems to meet the economic and social needs of the elderly.

Studies on Living Arrangements among the Elderly

Legare and Martel (2003) have attempted to highlight the differences and similarities regarding the living arrangements of the elderly in Canada, Switzerland, United Kingdom and Finland, and to investigate the effects of these differences and similarities in demographic trends. The countries studied show great similarities in living arrangements, notwithstanding their cultural differences. Living alone is becoming popular although gender differences do exist. A good proportion of elderly women live alone while their male counterparts live with the spouses, a phenomenon explained by the higher life expectancy among females. Emerging demographic trends and increasing divorce rates influence the living arrangements at old age greatly (Legare and Martel 2003; Martel and Carriere 2003). In Asian countries, support and care of the elderly come mostly from the family. Martel and Carriere (2003) also found that

prevalence of widowhood and divorce rates have different impacts on the living arrangements of the elderly.

Besides living arrangements, housing conditions of the elderly are a prominent research area, as everyday environment has a direct impact on the well-being of individuals (Gaymu, 2003; Knodel and Auh, 2002). Gaymu identified the life-cycle effect on living arrangements. Commonly observed living arrangement patterns are of two types: parents benefiting with extra space when children are away and children living together with parents when they are not healthy. Knodel and Auh (2002) give a broad profile of Vietnam's older population including age-distribution, marital status, education, economic activity and household work, religious adherence, quality of house and living arrangements. However, the study identifies the remarkable stability in the living arrangement of Brunei elders with respect to co-residence of children, and thereby keeps away the common fear of desertion of elderly parents socially. The article adds, "the result makes clear that many older Vietnamese men and women are not simply dependent, but in turn, are likely to contribute to stability in living arrangement".

From the recent surveys conducted in Singapore, Philippines, Thailand and Vietnam, it was found that children continue to be an important source of support to the elderly (Knodel and Debavalya, 1997). Natividad and Cruz (1997) examined living arrangements among the Filipino elderly in terms of gender, marital status and place or residence. Although it is common for the elderly to live with their children, they are not passive recipients of support. Chan (1997) found that in Singapore, about 90 per cent of the elderly above age 60 lived with at least one of their children. This article foresees some of the gaps in the government's support systems for the elderly and the future challenges that might be faced by this population group and their care-givers.

In Thailand, despite major demographic and social changes, an extensive familial system of support and care is maintained (Knodel and Chayovan, 1997). However, some recent data indicate that the proportion of parents living with at least one child in the same dwelling unit is declining. But the article does not consider this an erosion of the support system, since daily contact between older parents and non-co-resident children compensates for this decline. Another study on Vietnam has identified that married sons constitute the most important source of social security in addition to the finding that the family constitutes the most important source of social support and security (Anh et.al, 1997).

Yet another study on living arrangements and health status of the elderly in rural China, Jun (2002) has constructed a health index by taking into account physical, mental and social well-being variables. The study has shown that aged people who live alone have the poorest health status compared to others. Mba (2002) addresses the demographic and socio-economic correlates of the living arrangements of elderly women. The study identifies several of these variables and draws major policy conclusions. It strongly suggests that there is evidence of some convergence of Lesotho to the Western family system.

Living arrangements among the Indian elderly using National Family Health Survey-I was addressed by Irudaya Rajan

and Kumar (2003). The study presents detailed characteristics of living arrangements among the elderly in India in terms of headship, average household size and marital status. The article draws attention to the fact that only 6 percent of the elderly in India live in a household where their immediate relatives are not present. Furthermore, the paper put forward a few policy prescriptions to enhance the well-being of the Indian elderly. Chen (1998) investigated the consequences of the living arrangements on the elderly in Taiwan. The study acquires special importance, as many Asian countries are expected to follow the Taiwan experience. Models were formulated to predict the probability of living in a specific household structure. The study identified migration, resource change and life cycle events as significant factors that decided living structure during old age.

The Second National Family Health Survey - Some new Observations

The National Family Health Survey (NFHS-2), undertaken in 1998-99 collected data on fertility, family planning, infant and child mortality, maternal and child health and utilisation of health services. It covered 99 percent of India's population living in all the 26 states. The survey collected information from 91,196 households in 25 states (excluding Tripura due to delay in data collection) and interviewed 89,199 eligible women in the age group, 15-49. It also included information on 32,393 children born during the three-year period preceding the survey. The survey has not collected detailed information on the elderly. However, the household questionnaire has incorporated a few features regarding the elderly population including living arrangements. The present analysis that highlights the pattern of living arrangements is based on NFHS2.

According to the NFHS-2, 7.9 percent of the Indian population is aged 60 and above (IIPS, 2000). Out of the sample, 9511 respondents live in urban areas, while their rural counterparts numbered 29583. The sex ratio of the elderly population was 920 females per for 1000 males, although when viewed age-wise, the sex ratio is favourable to females with advancing age.

Table 5: Percentage Distribution of Elderly by Age and Sex, 1998-99

	Total			*Urban*			*Rural*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
60 – 64	35.49	38.67	37.01	35.95	35.12	35.54	35.35	39.87	37.48
65 – 69	24.55	25.55	25.02	25.42	26.32	25.86	24.28	25.29	24.75
70 – 74	20.96	17.99	19.55	19.93	18.75	19.35	21.28	17.73	19.61
75 – 79	8.74	7.48	8.14	9.57	8.7	9.14	8.48	7.07	7.82
80 – 84	6.3	6.1	6.21	5.69	6.26	5.97	6.49	6.05	6.28
85 – 89	2.04	2.09	2.06	2.15	2.4	2.27	2.01	1.99	2
90+	1.92	2.12	2.02	1.29	2.46	1.87	2.12	2.01	2.07
Total (%)	100	100	100	100	100	100	100	100	100
Total Sample	20440	18654	39094	4796	4715	9511	15644	13939	29583

Note: Tables generated from the raw data by the author.

Among the elderly, urban and rural differences with respect to age are negligible. Except for an excess of 5 percent of rural females in the age group 60-64 compared to the rural males, the gender differences are not very visible with the place of residence (Table 5). Almost 50 percent of the elderly males had no education, while the situation is even worse in the case of females (80 percent). As the majority of elderly in India are illiterate, their living conditions mostly depend upon their co-residence with children and their ability to work and earn an income beyond the officially designated age of retirement. According to the NFHS (1999-2000), 63 percent of the males and 58 percent of the females continue to work beyond 60. As they grow older, the work participation rate declines; however, even at 80 and above, 22 percent of males and 17 percent of females continue to work in India. Higher work participation among the elderly is also due to the lack of proper social security safety nets and high levels of poverty (Irudaya Rajan, 2004; Liebig Phoebe and Irudaya Rajan, 2003)). Only very few (1.3 percent among males and 0.7 among females) remain never married until their old age. Four in every five males are married currently, while the magnitude diminishes to half of this among their female counterparts. This reduction is compensated by the category widowed in the case of females, which could be explained by the fact that women live longer than men and that women are usually married to men who are older. Widows have additional problems due to their low levels of literacy. They have no independent income; their only source of livelihood is their children (Chen, Martha, 1988). It is necessary that the government should initiate policies and programmes specially designed to take care of widows at advanced ages.

It was reported that almost 84 percent of elderly males in the age group 60-64 were heads of households as against 16 percent among women. This is also true among rural and urban households. Even at the time of death (90 years and above) almost half of the elderly males were heads of households. The highest percentages of female-headed households are found among widowed and divorced women (Table 6).

Table 6: Head of the Household among the Elderly, 1998-99 (Percent)

	Urban		*Rural*		*Total*	
	Male	Female	Male	Female	Male	Female
60 – 64	85.67	18.42	83.73	15.22	84.19	15.96
65 – 69	83.35	18.21	81.81	15.35	82.18	16.09
70 – 74	76.99	22.62	77.83	16.67	77.64	18.24
75 – 79	73.2	20	74.98	14.21	74.52	15.91
80 – 84	65.2	18.64	64.83	14	64.91	15.2
85 – 89	53.4	22.12	60.51	13.36	58.75	15.9
90+	41.94	12.07	46.83	7.14	46.06	8.59
Total	79.73	19.24	78.79	15.17	79.01	16.19
Never married	39.19	12.96	32.49	13.58	34.32	13.33
Married	83.94	1.16	84.18	1.97	84.12	1.79
Widowed	59.23	29.78	58.46	24.56	58.61	25.95
Divorced	100	33.33	50	27.59	68.75	29.79

Note: Tables generated from the raw data by the author.

The household size is an indication of the degree of bond among the generations. If more and more people are living together, the elderly are likely to get better attention including care during sickness. If we define any household, which has more than five members as a joint family, nearly 71 percent of the households in India qualify. As of now, Indian women, on an average, have three children. If any family has more than six members (consisting of children, parents and at least one of the grandparents), they are most likely to be three-generation households. Almost half of the households in India are three-generation households.

As of now, single-member families are rare in India. However, among the elderly, 1.7 percent of males and 4.5 percent of the females are found to live alone. Close to 10 percent of the households consist of just two members. In terms of marital status, divorced persons are likely to live alone (17 percent), followed by never married (10 percent) and widows (7 percent). In terms of place of residence, 33 percent of the elderly live in eight member-households in rural areas compared to 28 percent in urban areas. On an average, the elderly reside in households with at least seven members. Urban households have a smaller average family size than rural households. The status of the current co-residence among the Indian elderly has also been analysed by sex and place of residence. Interestingly, only 2.9 percent of the elderly live alone and another 1.26 percent with others – relatives or non-relatives. More elderly women (4.07 percent) live alone compared to elderly men (1.77 percent). In other words, only four percent of the elderly in India are living in a household where their immediate relatives are not present. Another seven percent of the elderly live with their spouses alone, possibly due to the migration of their children (Table 7)

Table 7: Percentage Distribution of the Elderly by their Living Arrangements, 1998-99

	Urban			*Rural*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Living alone	1.97	3.49	2.72	1.7	4.33	2.92	1.77	4.07	2.86
With spouse only	8.1	4.86	6.51	8.27	6	7.22	8.22	5.65	7.01
With spouse, children and grand children	58.7	40.75	49.86	59.15	42.62	51.5	59.02	42.05	51.01
With children and grandchildren	29.17	48.75	38.81	30.13	45.97	37.47	29.86	46.83	37.86
With other relatives	1.97	2.11	2.04	0.75	1.06	0.89	1.09	1.38	1.23
With non-relatives	0.1	0.04	0.07	0.01	0.02	0.01	0.03	0.02	0.03
Total (percent)	100	100	100	100	100	100	100	100	100
Total Sample	4796	4715	9511	15644	13939	29583	20440	18654	39094

Note: Tables generated from the raw data by the author.

A little over half the elderly (51 percent) live with their spouses, own children and grandchildren; almost 38 percent live with their children and grandchildren as their spouses are no more. Thus only two categories, namely those who live with spouse, children and grandchildren, and those who live with children and grandchildren but without spouse, are predominant among the Indian elderly. Though much disparity is not noticed between rural and urban households, the differences are pronounced between men and women.

According to the NFHS, close to 60 percent of the male elderly live with their spouses, children and grandchildren; the corresponding percentage for the female elderly is only 42 percent. On the other hand, close to 50 percent of the female elderly live with their children and grandchildren (without spouse) and only 30 percent of the males live with their children and grandchildren but without their spouse. This finding can be interpreted in a different manner too. The elderly who live with children and grandchildren are likely to be widows or widowers. There are more widows in India than widowers who reside in large numbers with their children and grandchildren.

According to the NFHS, 58 percent of the elderly women are widows as against 17 percent of the men who are widowers. In all, 59 percent of the elderly widowers are reported as heads of households as against 26 percent widows. However, 31 percent of elderly widowers and 58 percent of elderly widows are reported as parents living in the households of their children. The same pattern is also true of both rural and urban households. Almost 93 percent of widowers and widows live with their children and grandchildren. Only 10 percent live alone or with other relatives. The family still provides strong support to the elderly. Another interesting observation arising from this analysis is that around 7 percent of widows live with their sons-in-law as against just 3 percent among widowers.

Though every household in India may not have an elderly member, some households could have more than one elderly member. Almost 58 percent of households had one elderly member above 60 years of age, 39 percent of households had two elderly members and 3 percent of households had three or more elderly members. The pattern is similar in both rural and urban areas. If the households have more than two elderly members, who are they and what is their relationship to the head of the household? Interestingly, many households do accommodate elderly relatives such as mother and father-in-law, uncles and aunts. It is possible that some households in which the head of the household is an elderly member, has his parents (80+) with them. This is a situation where four generations live under one roof.

It is evident that a suitable policy needs to be framed towards restoring familial care of the elderly in view of the drastic social changes that have taken place in the wake of modernisation. It goes without saying that prompt action for the provision of social security to the vulnerable poor elderly is called for before things worsen. Alternatives such as old-age homes may also be thought of with the support of non-governmental organisations and voluntary associations.

VI. Dependency among the Elderly

The National Sample Survey in its 52nd round (July 1995-June 1996) focused on issues such as economic independence, chronic ailments, retirement and withdrawal from economic activity and familial integration among the elderly 60 and above. This was a large-scale sample survey conducted throughout the country. The elderly covered in the sample consisted of 16,777 males and 16,428 females (for details, see Table 8).

Using the raw data on economic independence, this paper has attempted an assessment of the level of poverty among the Indian elderly according to sex, place of residence and marital status by major states. All the elderly in the sample were asked to state their economic dependence, which was coded into three categories: not dependent, partially dependent and fully dependent. We presume that fully dependent elderly need economic support in old age as they are below the poverty line. They should be integrated into various poverty alleviation and social security programmes. Tables 9 and 10 provide some details.

Table 8: Dependency Status among the Indian Elderly

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Not dependent	36.4	24.7	30.7	38.6	22.4	30.4	37.2	23.8	30.6
Partially dependent	18.6	17.1	17.9	16	13.4	14.7	17.6	15.6	16.6
Fully dependent	45	58.2	51.4	45.5	64.2	55	45.2	60.6	52.8
No of Elderly	10491	9954	20445	6286	6473	12759	16777	16428	33205

Note: Estimated by the author using the National Sample Survey data (52nd round).

Table 9: Fully Dependent Elderly by Sex and Place of Residence in Major States

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Andhra Pradesh	46	64.9	55.3	43.1	59.1	51.5	44.8	62.2	53.6
Assam	50.7	69	58.6	45.1	57.1	50.9	49.5	66	56.8
Bihar	36.7	54.6	45.1	37.4	63.2	49.9	36.8	56.5	46.2
Gujarat	45.3	58	51.8	46.5	63.6	55.4	45.9	60.7	53.5
Haryana	54.1	65.9	60	51.1	66.7	59.1	52.8	58.2	55.7
Himachal Pradesh	36.3	37.7	37	30	52.2	40.6	35.6	39.3	37.4
Jammu Kashmir	37.7	61.6	48.4	34.8	72.3	51.4	36.8	64.7	49.3
Karnataka	50.4	58.8	54.9	52.8	66.7	59.9	51.6	62.4	57.3
Kerala	53.4	57.7	55.8	53.4	66.9	61	53.4	61.4	57.8
Madhya Pradesh	42.1	51.4	46.7	45.5	59.4	52.2	43.3	53.9	48.6
Maharashtra	46.7	52.3	49.6	45.9	62.9	54.4	46.3	57.3	51.9
Orissa	49.4	62.4	55.6	40.4	69.6	55.9	47.5	64.1	55.6
Punjab	57.2	67.9	62.4	46.9	70.2	58.5	53.2	68.8	60.8
Rajasthan	43.7	54.8	49.6	42.6	60	52.1	43.2	56.9	50.6
Tamil Nadu	42.1	52.4	46.8	40.3	60.8	50.4	41.2	57.1	48.8
Uttar Pradesh	39.7	54.9	47	46.9	64.7	56	41.6	57.8	49.5
West Bengal	49.8	67.1	58.2	46.9	64.6	55.5	48.3	65.8	56.9
India	45	58.2	51.4	45.5	64.2	55	45.2	60.6	52.8

Note: Estimated by the author using the National Sample Survey data (52nd round).

In rural areas, 58 per cent of females and 45 per cent of males were fully dependent whereas in urban areas, these percentages were 64 and 46 respectively. There is a marked difference between males and females in this respect. The most vulnerable group consists of elderly females in urban areas; 64 per cent of them are dependent on others for food, clothing and health care. This is one of the reasons why the elderly continue to work in old age in spite of poor health. An assessment of the situation in the major states (Table 9) shows that in rural areas, only 5 states (out of 15) reported a male dependency level above 50 per cent. Ironically, all states except Himachal Pradesh have reported that more than half of their elderly women depended on others for their livelihood. Estimates range from 51 per cent in Madhya Pradesh to 69 per cent in Assam. In urban areas, with the exception of Haryana, Karnataka and Kerala, all major states report a level of economic dependency below 50 per cent for males. The situation is more vulnerable for elderly females in the urban areas. Their economic dependency ranges form 52 per cent in Himachal Pradesh to 72 per cent in Jammu Kashmir. As stated earlier, widowhood leads to major economic problems in old age. Analysis of the plight of the fully dependent elderly by widowhood status for men and women shows a marked difference

between widowers and widows. This is partly due to the elderly women's participation in household (invisible) work.

The 52nd National Sample Survey also assessed the problems faced by elderly men and women in obtaining the basic necessities of life such as food, clothing and medical care. All the elderly were asked: "Are your day-to-day requirements on the following (food, clothing and medicines) adequately met?" In rural areas, around 3 per cent of the females had difficulty in obtaining adequate food, 5 per cent had difficulty in purchasing clothing and 10 per cent had difficulty in purchasing necessary medicines (Table 10). The proportions are lower for males compared to females and lower in urban areas compared to rural areas. Nine per cent of elderly males and 11 per cent of elderly females in rural areas faced difficulties with regard to access to one of the three basic needs. The figures were 4 per cent and 5 per cent respectively for urban areas.

State wise distribution of the elderly who had difficulty in obtaining at least one basic need is presented in Table 11. Among rural females, Andhra Pradesh, Assam, Bihar, Tamil Nadu and West Bengal reported that more than 10 per cent of elderly had problems in adequately meeting at least one of their basic needs. A few states such as Gujarat, Karnataka, Kerala, Madhya Pradesh and Maharashtra reported percentages between 5 and 10. Rural females are at a disadvantage compared to their urban counterparts. Large variations existed between states among rural females – from 3 per cent in Punjab to 20 per cent in Assam. When we assess the situation by widowhood status of both men and women, the situation of women is worse compared to the general elderly; they are victims of both old age and the status of widowhood.

Table 10: Basic Needs Unmet among the Indian Elderly

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Food	2.9	3.3	3.1	1.4	1.6	1.5	2.3	2.7	2.5
Clothing	4.1	4.9	4.5	1.9	2.3	2.1	3.3	3.9	3.6
Medicine	8.9	10.2	9.5	3.8	4.6	4.2	7	8	7.5
At least one	9.2	10.6	9.9	4.1	4.8	4.5	7.3	8.3	7.8

Note: Estimated by the author using the National Sample Survey data (52nd round).

Table 11: Classification of the Indian Elderly by Sex and Place of Residence on the basis of at least one Basic Need Unmet

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Andhra Pradesh	14.3	15.5	14.9	5.4	6.9	6.2	11.6	11.6	11.6
Assam	13.4	19.7	16.2	10.6	7.6	9.2	12.8	16.7	14.6
Bihar	6.7	12.1	9.2	5.7	7.5	6.6	6.5	11	8.6
Gujarat	8.2	8.1	8.2	2.1	1.9	2.8	5.3	5.1	5.2
Haryana	3.7	4.7	4.2	5.2	5.3	5.3	4.4	5	4.7
Himachal Pradesh	0.5	2.1	1.3	0	2.2	1	0.5	2.1	1.3
Jammu & Kashmir	1.2	1.4	1.3	0.7	0	0.4	1	1	1
Karnataka	6.7	8.8	7.9	3.1	4.1	3.6	5	6.7	5.9
Kerala	3.4	6.8	5.5	1.8	2.9	2.4	9.4	5.2	4.3
Madhya Pradesh	5.3	6.1	5.7	1.2	1.3	1.2	3.9	4.5	4.2
Maharashtra	6.6	6.4	6.5	1.7	2.1	1.9	4.2	4.4	4.3
Punjab	4.1	3.1	3.6	1.5	2.7	2.1	3.1	3	3
Rajasthan	3.2	3.6	3.4	0.8	2.3	1.7	2.3	3.1	2.7
Tamil Nadu	8.1	13.4	10.5	4.9	5.4	5.2	6.5	8.9	7.6
Uttar Pradesh	4.6	4.3	4.5	0.8	1.7	1.3	3.6	3.6	3.69
India	9.2	10.6	9.9	4.1	4.8	4.5	7.3	8.3	7.8

Note: Estimated by the author using the National Sample Survey data (52nd round).

To assess the levels of poverty and dependency among the elderly, data on ownership of assets and property have also been used. The information collected is classified into four major divisions: owning and participating in financial assets, owning but not participating in financial assets, not owning but participating in financial assets and neither owning nor managing financial assets. The same question was also canvassed to assess the ownership and management of properties. According to this information, around 60 per cent of rural and urban females and around 30 per cent of rural and urban males in India had no valuable assets in their names (Table 12). They are the ones who need social assistance and the benefit of poverty alleviation programmes. Marked differences exist between males and females and between rural and urban areas and between major states of India. Kerala ranks first with 76 per cent of its elderly women reporting no financial asset in their name. No state except Bihar and Gujarat has less than 50 per cent of elderly women reporting 'no assets'. On the other hand, all states except Kerala have reported a proportion around 50 per cent as elderly without assets

Table 12: Percentage of Elderly with no Property by Sex and Place of Residence in the Major States of India

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Andhra Pradesh	33.2	64.3	48.5	35.6	70.5	54	34.2	67.1	50.9
Assam	9.2	45.8	24.9	15.9	50.5	32.6	10.6	46.9	26.6
Bihar	14.7	43.8	28.4	14.6	41	27.4	14.7	43.1	28.2
Gujarat	17.6	47.7	33.1	14	41.7	28.4	15.9	44.8	30.8
Haryana	18.6	62.5	40.7	19.2	56.4	38.3	18.9	59.8	39.6
Karnataka	22.8	59.3	42.1	32.5	67.8	50.7	27.4	63.3	46.1
Kerala	22.4	52.3	38.7	31.5	55.1	44.7	25.9	53.4	41.1
Madhya Pradesh	19.2	49.9	34.7	22.1	57.7	39.2	20.2	52.5	36.2
Maharashtra	19.7	56.9	39.2	24.5	58.4	41.3	22.1	57.6	40.2
Orissa	14.6	46.2	29.7	20.6	50	36.1	15.8	47.1	31.1
Punjab	20.9	62.4	41	18.5	64	41.1	20	63	41.1
Rajasthan	13.2	57.5	37	14.5	50.5	34.3	13.7	54.7	35.9
Tamil Nadu	24.7	56.4	39.1	32.6	64.5	48.4	28.9	61	44.2
Uttar Pradesh	12.2	46.8	28.8	14.2	47.9	31.5	12.7	47.1	29.5
West Bengal	11.5	57	33.8	19	56.7	37.4	15.2	56.8	35.6
India	16.6	50.2	33	22.2	54.3	38.5	18.7	51.8	35.1

Note: Estimated by the author using the National Sample Survey data (52nd round).

This is also true in case of property ownership. Almost half of the elderly women in India in both rural and urban areas have no property in their name. For females, no difference exists between rural and urban areas, whereas marked difference exists for males between rural and urban areas. Andhra Pradesh, Haryana and Punjab report that 60 per cent of their rural elderly had no property to fall back on in their old age. A similar pattern exists in urban areas.

VII. Health Status of the Elderly

Health problems are supposed to be the major concern of a society as older people are more prone to suffer from ill health than younger age groups. It is often claimed that ageing is accompanied by multiple illnesses and physical ailments. Besides physical illnesses, the aged are more likely to be victims of poor mental health, which arises from senility, neurosis and extent of life satisfaction. Thus, the health status of the aged should occupy a central place in any study of the elderly population. In most of the primary surveys, the Indian elderly in general and the rural aged in particular are assumed to have some health problems.

The Nandal, Khatri and Kadian (1987) study found a majority of the elderly suffering from diseases like cough (cough includes tuberculosis of lungs, bronchitis, asthma, and whooping cough as per the International Classification of diseases),

poor eyesight, anaemia and dental problems. The proportion of the sick and the bedridden among the elderly is found to be increasing with advancing age; the major physical disabilities being blindness and deafness (Darshan, Sharma and Singh, 1987). Shah (1993) in his study of urban elderly in Gujarat found deteriorating physical conditions among two-thirds of the elderly, consisting of poor vision, hearing impairment, arthritis and loss of memory. An interesting observation made in this study relates to the sick elderly's preference for treatment by private doctors. Besides physical ailments, psychiatric morbidity is also prevalent among a large proportion of elderly. An enquiry in this direction by Gupta and Vohra (1987) provides evidence of psychiatric morbidity among the elderly. This study also draws a distinction between functional and organic disorders in old age. It is found that functional disorders precede organic disorders, which become frequent beyond seventy. The First National Sample Survey (NSS) conducted during the second half of 1980s, focussed on the elderly and indicated that 45 per cent of the elderly suffered from some chronic illness like pain in the joints and cough. Other diseases noted in the NSS survey included blood pressure, heart disease, urinary problems and diabetes. The major killers among the elderly consisted of respiratory disorders in rural areas and circulatory disorders in urban areas. Another rural survey reported that around 5 percent of the elderly were bedridden and another 18.5 per cent had only limited mobility. Given the prevalence of ill health and disability among the elderly, it was found that dissatisfaction existed among the elderly with regard to the provision of medical aid. The author also referred to the fact that the sick elderly lacked proper familial care while public health services were insufficient to meet the health needs of the elderly.

The National Sample Survey in its 52nd round (July 1995-June 1996) focused on issues such as economic independence, chronic ailments, retirement and withdrawal from economic activity and familial integration among the elderly. This formed a large-scale sample survey conducted throughout the country. The sample consisted of 17,171 male and 16,811 female elderly persons. Among them, 20,950 lived in rural areas and 13,032 in urban areas. The following section analyses the raw data of this NSS round to assess the disease and disability profile and the patterns on health utilisation among the elderly across social groups (SC/ST). The following issues are analysed further:

(a) Self reported health
(b) Disability profile
(c) Disease profile

All the elderly were asked to state their perception of their health as 'good' or 'bad'. About 70 percent of the elderly males and females reported that their health status was 'good'. The difference between males and females and places of residence (rural or urban) is not significant. However, the proportion of females reporting good health was slightly higher than that of males in urban areas whereas the trend was the reverse in rural areas (Table 13).

Table 13: Health, Disease and Disability profile among the Elderly in India, 1995-96

Rural			*Urban*			*Total*		
Male	Female	Total	Male	Female	Total	Male	Female	Total
Sample Elderly								
		2095						
10737	10213	0	6434	6598	13032	17171	16811	33982
Reported as Good Health (%)								
70.05	68.53	69.31	71.53	73.02	72.28	70.6	70.29	70.45
Reported as No Disease (%)								
20.92	20.98	20.95	30.39	29.11	29.74	24.47	24.17	24.32
Reported as No Disability (%)								
59.33	57.45	58.41	63.41	61.87	62.63	60.86	59.18	60.03

Note: Based on the raw data of NSS 1995-96.

The proportion reporting good health declined from 70 percent among those aged 60 and above to 68 percent among those aged 70 and above and to 65 percent among those aged 80 and above. In order to ensure that the sample was not small, the country has been divided into eight regions to assess the self-perception of health.

Table 14: Percentage of Elderly who reported having Good Health by Regions of India, 1995-96

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
South	70.66	68.61	69.63	73.2	75.83	74.57	71.81	71.99	71.9
West	72.76	74.84	73.84	71.74	74.24	73.01	72.26	74.56	73.44
North West	72.68	70.67	71.65	72.5	76.76	74.72	72.61	73.19	72.91
North	71.38	69.75	70.6	72.86	74.05	73.45	71.77	70.94	71.37
East	65.65	60.46	63.21	70.32	67.23	68.79	67.29	62.99	65.23
North Hill	69.16	70.75	69.91	68.59	67.72	68.19	69.04	70.16	69.56
North East	65.45	61.74	63.83	65.24	63.95	64.59	65.38	62.63	64.11
Union Terriotiry	69.7	71.64	70.48	68.2	68.77	68.47	68.59	69.38	68.95
India	70.05	68.53	69.31	71.53	73.02	72.28	70.6	70.29	70.45

Note: East Region: Assam, Orissa, West Bengal;
North East Region: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura;
North Hill Region: Himachal Pradesh, Jammu & Kashmir;
North West Region: Haryana, Punjab, Rajasthan;
North Region: Bihar, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu;
Union Territories: Andaman & Nicobar Islands, Dadra & Nagar Haveli, Delhi, Lakshadweep, Pondicherry, Daman & Diu, Chandigarh;
West Region: Goa, Gujarat, Maharashtra.

The west region had the highest proportion (73.4) of the elderly reporting good health, followed by the north-west, south and north regions. The lowest proportion was reported from the north-east region (more details, see Table 14). Similar patterns were observed among ages 70 and 80 above. Detailed analysis was undertaken with respect to self-reported health among scheduled castes and scheduled tribes along with others. Compared to the general elderly, the elderly belonging to the SCs and STs reported poor health but the differences were not very high. The only exception was found in the case of urban females. However, there were not much differences between SCs and STs (Table 15).

Among the eight chronic diseases canvassed in the National Sample Survey, close to one-third of the elderly reported suffering from pain in joints, followed by cough (about 20 percent) and blood pressure (about 10 percent). Less than five percent of the elderly reported as suffering from piles, heart diseases, urinary problems, diabetics and cancer (Table 16). Differences were observed among sex, place of residence and socially vulnerable groups such as SCs and STs. In the case of joint pains, a common chronic disease among the Indian elderly, women reported a higher proportion compared to men, rural areas reported more compared to urban areas and among Scheduled Tribes, followed by Scheduled Castes. On the other hand, the incidence of cough was higher among males than among females. People most affected by cough consisted of Scheduled Tribes, followed by Scheduled Castes and general elderly as the lowest. With ailments such as piles, heart diseases, urinary problems and diabetics, the incidence was higher among males compared to females whereas in the case of cancer, the reverse trend was noticed. In general, except in the case of joint pain, cough and piles, the incidence of all other diseases was higher among scheduled castes compared to those among scheduled tribes.

Table 15 Percentage of Elderly who reported having good health by Scheduled Caste and Tribes, 1995-96

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
ST	70.35	66.33	68.44	69.53	75.39	72.37	70.2	68	69.15
SC	68.72	68.79	68.75	71.43	73.14	72.28	69.51	70.11	69.8
Others	70.4	68.88	69.65	71.65	72.89	72.28	70.93	70.66	70.79

Note: Based on the raw data of NSS 1995-96.

Table 16: Disease patterns among the Elderly by Scheduled Caste/Tribes, Others

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Cough									
ST	25.13	22.35	23.81	20.41	15.77	18.17	24.28	21.14	22.78
SC	21.88	21.92	21.9	19.64	17.71	18.69	21.22	20.64	20.94
Others	24.58	21.15	22.9	16.02	15.82	15.92	20.94	18.78	19.86
Piles									
ST	3.29	2.42	2.88	1.78	1.89	1.83	3.02	2.32	2.69
SC	2.14	2.53	2.33	2.46	2.97	2.71	2.23	2.67	2.44
Others	2.97	2.48	2.73	2.58	2.41	2.49	2.81	2.45	2.63
Problems of joints									
ST	40.25	40.64	40.43	28.7	35.33	31.91	38.18	39.66	38.89
SC	38.5	38.52	38.51	35.6	37.94	36.76	37.65	38.34	37.99
Others	38.23	38.81	38.51	32.74	35.46	34.13	35.9	37.32	36.61
High/Low BP									
ST	6.46	6.76	6.6	13.31	14.2	13.74	7.69	8.13	7.9
SC	7.31	6.56	6.95	17.97	19.2	18.58	10.45	10.39	10.42
Others	7.1	7.24	7.17	17.79	19.03	18.42	11.64	12.47	12.06
Heart Disease									
ST	1.94	2.06	2	2.37	2.52	2.44	2.01	2.15	2.08
SC	2.89	2.78	2.84	5.58	5.71	5.65	3.68	3.67	3.68
Others	2.28	2.04	2.16	6.14	5.37	5.75	3.92	3.52	3.72
Urinary Problems									
ST	2.26	2.35	2.3	1.18	2.21	1.68	2.07	2.32	2.19
SC	3.54	2.29	2.93	3.57	2.4	2.99	3.55	2.32	2.95
Others	2.97	2.28	2.63	3.39	2.71	3.04	3.15	2.47	2.81
Diabetes									
ST	1.68	1.78	1.73	3.25	4.73	3.97	1.96	2.32	2.13
SC	1.3	1.09	1.2	5.02	4.69	4.86	2.4	2.18	2.29
Others	2.13	2.11	2.12	6.93	6.49	6.7	4.17	4.05	4.11
Cancer									
ST	0.19	0.21	0.2	0	0.32	0.15	0.16	0.23	0.19
SC	0.33	0.05	0.19	0.45	0.57	0.51	0.36	0.21	0.29
Others	0.31	0.21	0.26	0.25	0.41	0.33	0.29	0.3	0.29
Sample									
ST	1548	1405	2953	338	317	655	1886	1722	3608
SC	2148	2012	4160	896	875	1771	3044	2887	5931
Others	7026	6767	13793	5195	5397	10592	12221	12164	24385

Note: Based on the raw data of NSS 1995-96.

As disease patterns have serious implications for health care expenditure, the elderly are classified into four different groups by sex, place of residence and region. The four groups consist of the following:

(a) Elderly with no disease
(b) Elderly with one disease
(c) Elderly with two diseases
(d) Elderly with three diseases

One-fourth of the elderly in India reported that they were not suffering from any chronic disease. The proportion was about 20 percent in rural areas and 30 percent in urban areas (Table 17). Not much difference was observed between the sexes. However, among the regions, the north-west reported the highest proportion of elderly with no disease, followed by west and south. The lowest proportion was reported by states in the east region. Similar patterns were observed among the elderly above 70 and also above 80.

Table 17: Disease Profile among the Elderly by Regions of India, 1995-96

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Elderly reported as having No Disease									
South	25.66	23.04	24.34	28.5	29.85	29.2	26.95	26.23	26.58
West	23.45	23.88	23.67	34.09	33.16	33.62	28.62	28.26	28.44
North West	25.76	27.11	26.45	35.7	35.3	35.49	29.76	30.5	30.14
North	19.43	19.61	19.52	32.45	27.1	29.78	22.85	21.69	22.29
East	13.87	13.75	13.81	18.14	16.57	17.36	15.37	14.8	15.1
North Hills	21.88	22.05	21.96	30.37	28.48	29.51	23.62	23.3	23.48
North East	16.39	17.68	16.95	34.31	31.75	33.03	22.54	23.34	22.91
Union Territory	30.3	31.34	30.72	36.04	32.41	34.33	34.55	32.19	33.48
India	20.92	20.98	20.95	30.39	29.11	29.74	24.47	24.17	24.32
Elderly reported as suffering from one Chronic Disease									
South	55.39	55.47	55.43	56.23	54.34	55.24	55.77	54.94	55.34
West	48.79	45.53	47.1	53.78	53.48	53.63	51.22	49.28	50.23
North West	48.21	46.04	47.11	50.34	48.49	49.38	49.06	47.06	48.03
North	49.18	47.69	48.46	47.3	51.46	49.38	48.69	48.73	48.71
East	65.01	64.97	64.99	69.14	71.43	70.27	66.46	67.38	66.9
North Hills	56.66	48.55	52.84	58.12	63.29	60.46	56.96	51.42	54.37
North East	58.96	55.18	57.31	50.11	51.25	50.68	55.93	53.6	54.86
Union Territory	55.56	47.76	52.41	50.53	52.96	51.68	51.83	51.88	51.85
India	53.9	51.76	52.85	54.66	55.11	54.89	54.18	53.07	53.63

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Elderly reported as suffering from two Chronic Diseases									
South	20.4	19.51	19.95	21.71	21.92	21.82	20.99	20.64	20.81
West	14.4	13.5	13.93	19.05	19.79	19.42	16.66	16.47	16.56
North West	14.9	15.56	15.24	16.42	19.47	18.01	15.51	17.18	16.37
North	18.45	18.15	18.3	21.13	20.19	20.66	19.15	18.72	18.94
East	27.86	28.3	28.07	32.39	35.41	33.89	29.45	30.96	30.17
North Hills	22.42	20.67	21.6	25.13	32.28	28.37	22.98	22.93	22.96
North East	24.17	22.71	23.54	17.61	19.95	18.78	21.92	21.6	21.78
Union Territory	21.21	19.4	20.48	23.67	29.64	26.49	23.04	27.5	25.07
India	20.15	19.43	19.8	21.87	23.08	22.48	20.8	20.86	20.83
Elderly reported as suffering from three Chronic Diseases									
South	2.71	2.31	2.51	4.27	4.13	4.2	3.41	3.16	3.28
West	1.12	1.2	1.16	4.01	4.37	4.19	2.53	2.7	2.61
North West	1.56	1.07	1.31	3.15	2.39	2.75	2.2	1.61	1.9
North	1.52	1.26	1.39	3.89	3.54	3.72	2.14	1.89	2.02
East	5.03	4.8	4.92	6.6	7.08	6.84	5.58	5.65	5.61
North Hills	3.13	1.53	2.38	4.71	6.33	5.44	3.45	2.47	2.99
North East	2.48	2.29	2.39	3.39	2.72	3.05	2.79	2.46	2.64
Union Territory	2.3	0	1.43	4.55	7.66	6.01	3.99	6.25	5.01
India	2.41	2.01	2.21	4.29	4.3	4.3	3.12	2.91	3.01

Note: Based on the raw data of NSS 1995-96.
East Region: Assam, Orissa, West Bengal;
North East Region: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura;
North Hill Region: Himachal Pradesh, Jammu & Kashmir;
North West Region: Haryana, Punjab, Rajasthan;
North Region: Bihar, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu;
Union Territories:Andaman & Nicobar Islands, Dadra & Nagar Haveli, Delhi, Lakshadweep, Pondicherry, Daman &Diu, Chandigarh;
West Region: Goa, Gujarat, Maharashtra.

One out of two elderly in India suffers from at least one chronic disease which requires life-long medication. The proportion is slightly higher in urban areas compared to rural areas. The Eastern region led all the other regions in India with a higher percentage of elderly (two out of three) suffering from at least one chronic disease, followed by the south; the lowest was in north and north-west India. Similarly, one out of five elderly reported suffering from two chronic diseases canvassed in the NSS; close to three percent suffers from three chronic diseases.

The NSS probed into five types of disabilities of the elderly. These were visual impairment, hearing problem, difficulty in walking (locomotor problem), problems in speech and senility (Table 18). Twenty-five percent of the elderly in India suffered from visual impairment, followed

by hearing difficulties (14 percent) and locomotor disability and senility (each 11 percent). The prevalence rates of all the five disabilities were higher in rural than in urban areas. Except for visual impairment, women were ahead in all the disabilities compared to males. Between SCs and STs, disabilities among scheduled tribes were high compared to that among scheduled castes. Compared to the general population and scheduled caste, the scheduled tribes reported the highest incidence of disabilities.

About 60 percent of the elderly in India live disability-free lives in old age. The highest proportion of no disability was reported in South India and the lowest in East India (Table 19). It was slightly higher among rural areas compared to that in urban areas. Among the five disabilities under investigation in the NSS survey, 40 percent of the elderly reported suffering from at least one disability and this was slightly higher among females compared to males. Sex differentials were reported for the prevalence of two and three disabilities; 15 percent suffered from at least two disabilities and another 6 percent suffered from three disabilities.

Table 18: Disabilities among the Elderly by Social Groups in India, 1995-96

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Visual									
ST	27.71	27.33	27.53	23.96	23.66	23.82	27.04	26.66	26.86
SC	28.12	26.09	27.14	26	27.09	26.54	27.5	26.39	26.96
Others	25.52	26.7	26.1	23.41	24.92	24.18	24.62	25.91	25.27
Hearing									
ST	17.89	20	18.9	13.91	17.03	15.42	17.18	19.45	18.26
SC	13.87	14.21	14.04	10.83	13.71	12.25	12.98	14.06	13.51
Others	14.66	16.23	15.43	12.03	12.03	12.03	13.54	14.36	13.95
Speech									
ST	4.84	5.77	5.28	5.62	3.79	4.73	4.98	5.4	5.18
SC	3.26	3.73	3.49	2.12	2.74	2.43	2.92	3.43	3.17
Others	3.69	3.95	3.81	3.21	3.15	3.18	3.49	3.59	3.54
Locomotor									
ST	11.3	11.89	11.58	10.06	7.57	8.85	11.08	11.09	11.09
SC	10.34	10.49	10.41	8.71	9.6	9.15	9.86	10.22	10.03
Others	10.86	11.56	11.2	8.93	9.88	9.41	10.04	10.81	10.42
Amnesia / Senility									
ST	10.72	12.17	11.41	9.47	8.83	9.16	10.5	11.56	11
SC	10.34	10.24	10.29	6.47	9.03	7.74	9.2	9.87	9.53
Others	9.34	10.36	9.84	7.08	7.23	7.16	8.38	8.97	8.67

Note: Based on the raw data of NSS 1995-96.

Table 19: Disability Profile among Elderly by Regions of India, 1995-96

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Elderly reported as having No Disability									
South	59.79	59.33	59.56	65.77	64.68	65.2	62.49	61.84	62.16
West	54.83	55.75	55.31	63.81	59.54	61.65	59.19	57.54	58.35
North - West	63.94	59.82	61.84	64.71	61.18	62.87	64.25	60.39	62.26
North	61.4	58.46	59.99	61.54	63.33	62.43	61.44	59.81	60.65
East	55.34	51.5	53.54	59.84	57.5	58.68	56.92	53.75	55.4
North Hills	58.02	60.18	59.04	65.45	65.82	65.62	59.55	61.28	60.36
North - East	58.73	56.25	57.65	62.08	62.13	62.1	59.88	58.61	59.3
Union Territory	63.64	53.73	59.64	63.25	58.5	61.01	63.35	57.5	60.68
India	59.33	57.45	58.41	63.41	61.87	62.63	60.86	59.18	60.03
Elderly reported as suffering from one Disability									
South	39.25	38.6	38.92	32.36	33.76	33.09	36.13	36.33	36.23
West	44.31	43.13	43.7	35.64	39.39	37.54	40.1	41.36	40.75
North West	34.87	38.49	36.71	33.52	37.19	35.43	34.32	37.95	36.19
North	37.02	39.6	38.26	36.96	34.81	35.88	37	38.27	37.62
East	43.89	46.85	45.28	38.28	41.18	39.71	41.92	44.73	43.27
North Hills	40.63	39.36	40.03	34.55	33.54	34.1	39.37	38.22	38.84
North East	37.62	39.18	38.3	35.44	35.6	35.52	36.87	37.74	37.27
Union Territory	35.35	46.27	39.76	34.98	40.32	37.5	35.08	41.56	38.03
India	39.3	40.69	39.98	35.03	36.62	35.83	37.7	39.09	38.39
Elderly reported as suffering from two Disabilities									
South	14.69	15.5	15.1	11.35	10.72	11.02	13.18	13.26	13.22
West	17.41	17.01	17.21	12.49	14.62	13.56	15.02	15.88	15.46
North West	13.71	13.87	13.79	11.9	13.82	12.9	12.98	13.85	13.43
North	16.8	18.8	17.76	13.97	16.03	15	16.06	18.03	17.02
East	18.32	20.77	19.47	14.13	16.09	15.1	16.85	19.02	17.89
North Hills	14.67	14.4	14.54	12.57	12.03	12.32	14.24	13.93	14.1
North East	15.45	19.82	17.35	14	12.7	13.35	14.95	16.96	15.87
Union Territory	13.13	31.34	20.48	13.43	19.37	16.23	13.35	21.88	17.24
India	16.08	17.49	16.77	12.74	13.84	13.3	14.83	16.05	15.44

	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Elderly reported as suffering from three Disabilities									
South	4.25	5.04	4.65	2.98	3.27	3.13	3.68	4.21	3.95
West	6.98	6.55	6.76	4.92	5.35	5.14	5.98	5.98	5.98
North West	5.34	5.51	5.42	3.56	5.28	4.45	4.62	5.41	5.03
North	7.49	8.12	7.79	6.37	6.02	6.19	7.19	7.54	7.36
East	7.44	8.45	7.92	5.54	4.56	5.05	6.77	7	6.88
North Hills	5.57	4.29	4.97	2.62	5.06	3.72	4.96	4.44	4.72
North East	6.84	8.38	7.51	6.77	5.44	6.11	6.82	7.2	6.99
Union Territory	5.05	11.94	7.83	3.53	6.72	5.04	3.93	7.81	5.7
India	6.38	6.84	6.61	4.59	4.82	4.7	5.71	6.05	5.88

Note: Based on the raw data of NSS 1995-96.
East Region: Assam, Orissa, West Bengal;

North East Region: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura;
North Hill Region: Himachal Pradesh, Jammu & Kashmir;
North West Region: Haryana, Punjab, Rajasthan;
North Region: Bihar, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu;
Union Territories: Andaman & Nicobar Islands, Dadra & Nagar Haveli, Delhi, Lakshadweep, Pondicherry, Daman & Diu, Chandigarh;
West Region: Goa, Gujarat, Maharashtra.

In the 52nd round of NSS, a few more interesting questions were put to all household members about the morbidity status and hospitalisation. The questions were:

(i) Whether hospitalised during the last one year?
(ii) Whether ailing during the last 15 days?
(iii) Whether ailing on the day before the date of survey?
(iv) If yes to question (iii), whether normal activity was disrupted?

The raw data relating to the above questions were analysed wherever the elderly had responded positively and those relating to SC, STs and others were compared. Close to 10 percent of the elderly among STs and 12 percent among SCs reported that they had been hospitalised during the year preceding the survey (Table 20). The proportion of the elderly who were hospitalised was lower among SCs and STs compared to the rest of the elderly. The results, however, should not be taken at its face value because most of the elderly from poor households in India are not hospitalised till the very last hours, as they cannot afford the medical expenses. The proportion of elderly ailing during the 15 days preceding the survey was reported to be slightly higher than the proportion of elderly hospitalised during the year preceding the survey. Though the elderly in India tend to suffer from many ailments in the later years of life, they do not undergo proper medical treatment due to the absence of a comprehensive health insurance scheme; this is particularly true in the case of the poor elderly. One out of every 10 elderly in India was ailing on the

last day preceding the survey. If this proportion is applied to India's 80 million elderly, it follows that close to 8 million suffer from some ailment every day. About 5 percent of the elderly who were ailing on the day preceding the survey, stated that their usual activities were disrupted due to their indisposition; they were thus deprived of a day's earnings.

In this same NSS round, information was also elicited about deaths in the household during the year. This information collected included age at death, cause of death, place of death and medical attention if any before death. About 1283 elderly persons were reported as dead during the last one year; among whom 755 were males and 528 were females (Table 21). Among the elderly, 80 percent died at home and only 17 percent died in the hospitals (9 percent in government hospitals compared to 8 percent in private hospitals). Similarly, close to 30 percent of the elderly did not receive any medical attention before death. A few were examined by medical practitioners. One in three was reported to have died of old age. More than 5 percent of the elderly died due causes such as fever heart failure and disorders of the respiratory, circulatory and digestive systems.

Table 20: Morbidity Particulars among the Elderly with social groups, 1995-96

	Rural			*Urban*			*Total*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Whether Hospitalised									
ST	8.59	6.83	7.75	10.36	8.83	9.62	10.85	8.83	9.89
SC	8.33	6.46	7.43	13.84	9.49	11.69	14.11	10.59	12.4
Others	9.04	7.26	8.16	12.82	10.56	11.67	18.52	15.68	17.12
Total	8.83	7.04	7.96	12.83	10.34	11.57	16.53	13.73	15.16
Whether ailing during the last 15 days preceding the survey									
ST	12.86	13.88	13.34	10.36	9.15	9.77	12.86	13.88	13.34
SC	16.57	17.3	16.92	17.3	15.43	16.37	16.57	17.3	16.92
Others	17.44	17.5	17.47	16.44	14.77	15.59	17.44	17.5	17.47
Total	16.6	16.96	16.78	16.24	14.58	15.4	16.6	16.96	16.78
Whether ailing on the day preceding the survey									
ST	8.14	9.4	8.74	5.92	6.62	6.26	8.14	9.4	8.74
SC	12.38	12.52	12.45	13.5	11.54	12.54	12.38	12.52	12.45
Others	12.62	12.43	12.53	12.88	11.58	12.22	12.62	12.43	12.53
Total	11.93	12.03	11.98	12.6	11.34	11.96	11.93	12.03	11.98
If usual activity disrupted due to ailments, yes									
ST	3.68	3.7	3.69	1.78	3.47	2.6	3.68	3.7	3.69
SC	4.84	4.82	4.83	4.91	3.89	4.4	4.84	4.82	4.83
Others	4.92	4.39	4.66	4.08	3.85	3.97	4.92	4.39	4.66
Total	4.73	4.38	4.56	4.08	3.84	3.96	4.73	4.38	4.56

Note: Based on the raw data of NSS 1995-96.

Utilisation of Health Services:
The extent of utilisation of health services is an index of accessibility and affordability of the households, particularly the poor households in which elderly live. The frequent occurrence of illness among the aged calls for regular utilisation of health services provided by private and public sectors as well as charitable institutions. In the NSS survey, additional data were collected on the use of health services among the elderly who had undergone medical treatment during the 365 days preceding the survey. About 4000

Table 21: Medical attention at death among the Elderly

	60 – 69	*70 - 79*	*80 +*	*Total*
Medical attention before Death				
Government	31.47	21.9	14.75	23.83
Others	11.75	13.54	10.03	11.76
Registered Medical Practitioner	22.11	25.73	21.83	23.15
Other Medical Practitioner	10.36	12.42	14.45	12.07
No medical attention	24.3	26.19	38.94	29.03
Cause of death				
Old age	18.92	37.02	64.31	37.15
Disorders of respiratory system	15.94	11.74	7.08	12.15
Diseases of circulatory system	5.98	6.09	2.65	5.14
Accidents & injuries	2.19	3.61	1.18	2.41
Fevers	6.97	5.42	4.13	5.69
Digestive disorders	6.57	3.84	4.42	5.06
Disorders of the nervous system	4.98	3.61	1.77	3.66
Other symptoms	20.72	16.03	9.73	16.2
Bleeding	0.2	0.45	0	0.23
Sepsis	0	0.23	0	0.08
Obstructed labour	0	0.23	0	0.08
Anaemia	0.2	0	0	0.08
Jaundice	1.2	0.45	0	0.62
Heart failure	6.77	5.42	2.36	5.14
Others	8.96	5.87	2.06	6.07
Place of Death				
Home	73.31	79.46	89.68	79.76
During transport	2.79	1.13	0.59	1.76
Government Hospital	12.95	8.13	4.13	9.01
Private Hospital	8.57	9.26	4.13	7.49
Others	2.19	1.81	0.88	1.68

Note: Based on the raw data of NSS 1995-96.

elderly reported that they had been hospitalised. Among them, 42 percent had gone to government hospitals and 39 percent to private hospitals (Table 22). About 45 percent of the elderly, who utilised the services of government hospitals, were admitted in free wards and 40 percent were admitted in the pay ward and 15 percent in special wards. Regarding duration of stay as in-patients, about 50 percent of them remained for a week. However, 52 percent of them had availed treatment before hospitalisation and 67 percent continued their treatment after discharge from the hospital.

Table 22: Utilisation Pattern of Health Services among the Elderly

	Total			*Percentage*		
	Male	Female	Total	Male	Female	Total
Type of hospital						
Public Hospital	1099	613	1712	44.21	39.29	42.31
PHC	69	58	127	2.78	3.72	3.14
Public dispensary	10	4	14	0.4	0.26	0.35
Private hospital	963	620	1583	38.74	39.74	39.13
Nursing home	208	147	355	8.37	9.42	8.77
Chari. institution	122	107	229	4.91	6.86	5.66
Others	15	11	26	0.6	0.71	0.64
Total	2486	1560	4046	100	100	100
Type of ward						
Free	1129	665	1794	45.4	42.57	44.31
Paying general	964	658	1622	38.76	42.13	40.06
Paying special	394	239	633	15.84	15.3	15.63
Stay in hospital						
One week	1186	845	2031	47.75	54.17	50.22
Two weeks	542	309	851	21.82	19.81	21.04
Three weeks	390	224	614	15.7	14.36	15.18
Four weeks	79	39	118	3.18	2.5	2.92
Above four weeks	287	143	430	11.55	9.17	10.63
Treatment undertaken before hospitalisation						
Yes	1388	788	2176	54.35	48.64	52.13
Treatment continued after discharge						
Yes	1714	1080	2794	67.11	66.67	66.94
Hospital charges paid						
Yes	1096	736	1832	52.69	56.88	54.3
Total Medical Expenditure during hospitalisation (in Rupees)						
Below 500	525	345	870	24.91	26.24	25.42
501 - 1000	319	225	544	15.13	17.11	15.89
1001 - 2000	363	241	604	17.22	18.33	17.65
2001 - 3000	200	131	331	9.49	9.96	9.67
3001 - 4000	140	91	231	6.64	6.92	6.75
4001 - 5000	116	70	186	5.5	5.32	5.43
Above 5000	445	212	657	21.11	16.12	19.19
If any loss in household income						
Yes	752	388	1140	35.42	28.93	32.91

Note: Based on the raw data of NSS 1995-96.

Close to 54 percent of those who were hospitalised paid for their treatment. Among them, about 55 percent of them paid less than Rs. 1000 and close to 10 per cent paid over Rs. 5000. In case of hospitalisation of the elderly, about 33 percent of households lost income due to absence from work. About 40 percent of them spent from their savings to meet hospital charges and another 27 percent borrowed money for treatment.

Policy Prescriptions

Based on the above observations made on the health status of India's elderly, it can be concluded that some definite health intervention measures are necessary to cater to specific diseases associated with old age. This calls for the establishment of special geriatric wards within public sector health facilities and concessions in private hospitals through identity cards for the poor elderly. With the ongoing fertility transition, the demand for maternal and child health services are likely to fall sharply and therefore the Medical Council of India should have specially trained personnel to treat geriatric disorders.

This vulnerable section of society like any other economically backward section of the population needs to be provided with subsidised or concessional health care facilities. There should be special wards for treating the elderly in general hospitals throughout the country. There should also be separate counters for elderly patients so that they do not have to stand or wait in long lines along with other patients.

Our earlier studies, group discussions and case studies clearly indicate that the elderly in India mainly face three types of handicaps relating to hearing, vision and mobility. The majority among them suffer from ailments relating to vision and hearing. These handicaps can be rectified through the use of spectacles and hearing aids. For instance, Arvind Eye hospital in Tamil Nadu provides free eye check up for the elderly, performs free surgery and gives them with eye glasses. If the government is serious about helping the elderly, it should provide a budgetary allocation for the purpose so that they can enjoy their later years and be an asset to the family as well as to society. Non governmental organisations such as Helpage India should come forward in a big way to help the elderly.

Most of India's elderly being economically dependent, the cost of treatment is often a burden on the household. Therefore, many of the elderly ignore their ailments unless they become too acute. Thus, there is a great need for an appropriate insurance scheme for enabling the elderly to meet their medical expenses. Evidently such schemes should be made compulsory for all workers gainfully employed during their economically active years of life.

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