CHAPTER 1

INTRODUCTION

INTRODUCTION

RESEARCH FINDINGS

- Ageing – World Perspective
- Ageing – National Perspective
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- Social Determinants
- Mental Health & Social Well-Being
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- Health Problems
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THEORITICAL APPROACHES TO GERIATRIC HEALTH
INTRODUCTION

Changes in society and the ageing of individuals are the realities which react to the varying conditions of living beings. Changing age structure, its potentials and problems cumulatively increases as the social change proceeds. On all these situations, the individual’s capacity or ability is a crucial factor in the dynamic sense of his / her existence. Health or the physical and mental capacities of human beings are primarily the governing factors in the normal functioning of the individuals and the society. The changes in the age structure many a time directly influence both mental and physical functions of human beings in the society. An important phenomenon of social life is the increasing level of age and the decreasing dimensions of health. In other words their relations are inversely connected as they progress in frequency. Thus geriatric health appears to be primarily influenced by the social trends influencing the individual life of the old. Here either the institutional influences or social influences are the primary concerns in the real determination of the solution for the same. Ageing of population is a byproduct of social reality which is usually called the demographic transition. The rapid decline in fertility and the lowering of mortality rates in recent years has lead to a dramatic rise in the number and the proportion of the elderly in the populations of the developed and developing nations. But as a consequence of a rapid decline in fertility, and a parallel trend of increasing life expectancy, the
developing countries have become increasingly aware of a wide range of problems regarding ageing. It has commonly been reviewed as a consequence of the industrial revolution, but it is much more closely related to changes in public health and education than to the changes in the modes of production. Fall in birth rate and steady decline in mortality rate in conjunction with an increase in life expectancy, are leading to a rise in the proportion of the old people in the total population. In most situations geriatric health, the problems associated with it, and the solutions to these problems are mainly derived from the social responsibilities as well. In the context of modern developments various kinds of influences viz; emotional, cultural, economic, ideological, and even religious factors appears to be related to the real dynamics of the problem. In the light of the various theoretical and research findings in these areas the study has been framed on the following lines.

Geriatric health is influenced by many factors like age, gender, lifestyle habits, education, food habits, residence, marital status, financial well being, family size and structure, as well as cultural traditions such as kinship patterns, the availability of social services and social support and the physical features like housing structure and also of local communities. The demographic background of the elderly plays a pivotal role in the health and health related aspects of the old age population. Age is one of the demographic indicators which have an important
bearing on the health status of the elderly. As age advances, the elderly develop
more vulnerability to illness, and their health problems increase with time. The
association between age and perception of health status is significant among the
males but not in the case of female elderly [S.Sivaraju, 2002]. Marital status of the
elderly is another important factor on which their overall care and support both
from with the family and from the society, which has an important effect on the
health and lifestyle of the elderly. Age at widowhood is another indicator of the old
age health. A Household size also depicts the extent of pressure on family. The
religion and caste of an older person have much influence on his/her lifestyles and
living conditions. Educational background, housing condition and occupational
background also plays an important role in determining the health status of the old
aged. Lack of medical facilities and poor economic condition are responsible for
the lower health status of the old people [Rao,2003]. The marital status of the
elderly assumes special significance in the context of care in old age; those who
are married seem to be fare better in economic and social aspects than those who

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1 Siva Raju S. (2002), Health of the elderly in India, Issues and Implications, Research and
Development Journal, Help age India, 8:1

2 Rao M.K (2003), Health status of the rural aged in Andhra Pradesh, A sociological perspective,
Research and development Journal, Help Age India, 9:2.
are single [S. Irudaya Rajan et al., 2003]. Invisible changes that are associated with biological process of ageing are those which are occurring within the body and which invariably result in functional decline. In order to ensure healthy ageing, health promoting behaviour is absolutely essential. It should however be remembered that such behaviour should not and cannot be started when the person is already old, but should be initiated in late adult age. Physical activity is possibly the most crucial requirement for healthy ageing. Such activities invariably improves blood supply throughout the body and thereby reduce atrophy of muscle mass and bone mass and keeps the joints responsible for mobility in better shape. Various types of physical exercises are being promoted for older populations to keep the muscle mass in the proper condition and not undergo atrophies. However, it is important to remember that no physical exercise can increase the muscle mass of the elderly individuals due to physiological reasons. Health problems exist among human beings of all age groups, but rather range and frequency is more varied and intensive in old age. Ill-health and diseases are more common among the elderly because of the degenerative changes in the human body making it more susceptible to diseases accompanied by low resistance. Physical and mental

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3 Irudaya Rajan S. and S. Sanjay Kumar (2003), Living arrangements among the Indian elderly, Evidence from national family health service, Economic and political weekly, 38:1, January 4-10, pp-75-80
degeneration during the ageing process sometimes makes the elderly hostile and angry and they blame others for their misfortune [Geetha Gowri et al., 2003].

Morbidity pattern of the aged found that multiple morbidities are so common among them. In a study of the retirees on the disease pattern, blood pressure is rated the highest and diabetes is rated second [Sunder Lal et al., 1999]. The population of India is currently moving towards an old age structure and it is certain that there will be rapid growth in the elderly population in the near future.

The old people face problems of health and disability and financial constraints with inadequate pension and retirement funds. The elderly in urban areas are the most vulnerable, especially poor women [S.Irudaya Rajan et al., 2005]. Because of the changing trend of population ageing in India, the elderly face a number of problems which range from absence of ensured and sufficient income to support themselves and their dependents, ill health, absence of social insecurity, loss of a social role and recognition, the non availability of opportunities for creative use of free time. This trend clearly reveals that ageing will become a major social challenge in the future; vast resources will need to be directed towards the support,

4 Geetha Gowri et al, (2003), Elderly women-A study of the unorganized sector, Discovery publishing house, New Delhi, p-123

5 Sunder Lal Dr. and (Brig) S.L. Chadha and Dr. P.C Bhatta (1999) 25:5

6 Irudaya Rajan S and Phoebe. S. Liebig (2005), An ageing India-Perspectives prospects and policies: Rawat publications, New Delhi
care and treatment of the elderly [S.Sivaraju, 2002]⁷. Reports on Health service in Kerala reveals that the incidence in chronic and degenerative disease is increasing very fast and this has called for a shift in the technology and management of health care in the State. Diabetes, hypertension, cardio vascular disease, coronary heart disease and even cancer have been found to be progressively increasing in Kerala. The pattern of disease is moving close to that of the developed countries, there is now an “expansion of morbidity” where old age is characterized by a long period of illness which may or may not be of a serious nature. This means that the longer a person lives, the longer he lives with illness [Nayar, 2000]⁸. The socio-economic and health implication of ‘graying of the nations’ is posing a serious challenge to the development. Aged males have more ailments than females. There is definite relation of health to richness, education, and social status [Purohit & Sharma, 1974]⁹. In villages more females reported poor health. Rich persons with higher education, married and living with spouse derived greatest enjoyment from life [Lawton, 1943]¹⁰.

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⁷ Siva Raju S. (2002), Health of the elderly in India, Issues and Implications, Research and Development Journal, Help age India, 8:1

⁸ Nayar P.K.B. (2000), The ageing scenario in Kerala, A holistic perspective, Research and development journal, Help age India.6:2


¹⁰ Lawton G (1943), Happiness in old age, Mental hygiene, New York, 27, pp-231-237
Elderly females have low rates of chronic illness and have short hospital stays compared to widows and single people. It was found that excellent relationship between good health participation in activities and good adjustment. It was also seen that there was steady decline in health and advancement of life. Elderly women over 75 years rated their health as very poor, eight times as compared to their counterparts in sixties. Commonest cause of morbidity found in society is cardiovascular disease. Even in rural areas disorders associated with heart and lung tend to be more prevalent. Economic status of the elderly is expected to be very important in determining their health status. Availability of adequate financial resources for the elderly not only enables them to get proper medical aid but also helps in constant monitoring of their health conditions [Saad, 2001].

Regarding the residential pattern, Zengyi and others [2002] have revealed that, the higher the age, higher is the proportion of the oldest old living with their children. The oldest old females of all age groups are more likely to live with their children because they are more likely to be widowed and economically dependent. The demographic pictures of population in many countries are changing very

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rapidly. Ageing is universal, but ageing and old age are functional and not chronological concepts. The problem of old age is a significant human and social problem in recent times. The problem of ageing is found in almost all the countries of the world. The chief mental problems found by Hitesh. N. Patel [1997] are mental tension, fear of death, feeling of loneliness, feeling of helplessness, depression, feeling of uselessness and whims - the feeling of mental freedom. According to him a great majority of old people were found suffering from mental tension, because of the ill health of self or their life partner, bedridden self or life partner, conflict with other members of the family, contradictory life values, economic dependency on others. Many of them lack of adjustment in old age, and trouble in passing time. It is widely believed that depression is common in older adults, but in fact prevalence rates vary widely. Mild depression and situational depression are more frequent than major instances of depression. Depression is more frequent in older women [Prema B Patil, 2000].

Psychologically a maximum number of the aged feel isolated, frustrated and depressed. A good number of the aged feel separation of children as a major

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13 Hitesh Dr. Patel (1997), Mental problems of ageing and care of them by their family, Research and development journal, Help age India, 4:1.

setback in their life [Siva Raju, 2002]°. It is revealed that females had lower levels of depression compared to males. The depression levels of respondents living in joint families were lower [Prema B Patil 2000]°.

A study on the morbidity pattern of aged found that multiple morbidities were common among the elderly [Sunderlal et al., 1999]°. However the socio economic and health status of the aged revealed that prevalence of chronic as well as non-chronic diseases is obviously high among the elderly [Nair 1989]°.

A study conducted on the burden of ill health among elderly in Kerala found that visual disability was the most prominent form of disability among elderly followed by loco motor, hearing, senility and speech disability. Sex wise differentials showed that the conditions like visual, hearing and speech disabilities to be more predominant in females than males. The prevalence of all these forms of disabilities were found to be much higher in rural areas than in urban areas and for elderly from poor household than their counterparts with better economic status

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° Siva Raju S. (2002), Health of the elderly in India, Issues and Implications, Research and Development Journal, Help age India, 8:1

° Prema B. Patil (2000), Psychosocial problems of the retired, Social welfare, pp.18-25

° Sunder Lal. Dr. and (Brig) S.L. Chadha and Dr. P.C Bhatta (1999) 25:5

and hypertension among the urban elderly was twice as high as among the rural elderly [Dillip, 2001]. Research finding based on National Sample Survey Organization revealed that the elderly suffer from problems like ophthalmologic, bone and joints, hearing, gastro-intestinal, cardiovascular, respiratory, nervous system, skin, endocrinial and nutritional disorders. The health problems of elderly tend to increase with advancing age and very often the problem aggravated due to neglect, poor economic status, social deprivation and inappropriate dietary intake [Chandra Pal Singh, 2005]. Generally the health of the aged male is better than that of his female counterpart. Most of them suffer from more than one health problem [Tripathi, 2001]. Ageing found to be directly related to disability and decreased activity [Haber, 1970].

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19 Dillip T.R (2001), The burden of ill health among the elderly in Kerala: Research and development journal Help age India. 7:2, pp.40-50

20 Chandra Paul Singh Dr. (2005), Social - economic status and health conditions of landless rural aged in Haryana, Research and development journal Help age India. 11:1


22 Haber (1970), Age and capacity devaluation, Journal of health and social behaviour, vol-II, No:3
RESEARCH FINDINGS

AGEING - WORLD PERSPECTIVE

Since the last century, human civilization has witnessed a silent revolution- an ageing population. This population ageing reflects both significant increases in longevity and significant decreases in fertility. The United Nation reports on population and population projections indicate that today the median age for the world is 28 years. Over the next four decades, the world’s median age will likely increase by ten years, to reach 38 years in 2050. In 2000, the population aged 60 years and above, numbered 600 million, triple the number present in 1950. In 2009, the number of older persons had surpassed 700 million. By 2050, 2 billion older persons are projected to be alive, implying that their number will once again triple over a span of 50 years. Globally the population of older persons is growing at a rate of 2.6% per year, considerably faster than the population as a whole, which is increasing at 1.2% annually. At least until 2050, the older population is expected to continue growing more rapidly than the population in other age groups. Such rapid growth will require far-reaching economic and social adjustments in most countries [Hemamalini Ramakrishnan, 2012]23. According to the World population ageing report prepared by the United Nations Department of Social and

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23 Hemamalini Ramakrishnan (2012), Ageing population, policy responses and challenges, 14th global conference of actuaries, Feb 19-21, Mumbai
Economic affairs, Population ageing is enduring. Since 1950, the proportion of older persons has been rising steadily, passing from 8% in 1950 to 11% in 2009, and is expected to reach 22 percent in 2050.

One of the major features of demographic transition in the world has been the considerable increase in the absolute and relative numbers of elderly people. This has been especially true in the case of developing countries like India, where ageing is occurring more rapidly due to the decline in fertility rates combined by increase in life expectancy of people achieved through medical interventions. About 60% of the elderly live in the developing world and this will rise to 70% by 2010. Further the older population itself is ageing, with the oldest old being more than 10% of the world’s elderly [Indirani Gupta et al., 2003].

In 1950 there were 205 million people who were over 60, in 2000 there were 606 million and by 2050 there will be two billion. The number of elderly trebled over the last 50 years and an encore is expected in the next 50 years. As a proportion of the total world population, the number of elderly will double in the next 50 years. This demographic change is fast turning, the hair of policymakers prematurely grey throughout the world, especially in developing countries, where the growth of

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24 Indirani Gupta and Deepa Sankar (2003), Health of the elderly in India: A multi variate analysis. The journal of health and population in developing countries, ISSN 1095-8940.
the aged population is happening at a more rapid pace [Asha Krishnakumar, 2004]25.

While world population is growing at a rate of 1.7 percent per year, the proportion of those aged 55 years and above is increasing at 2.2 percent per annum and the number of aged 65 and above at 2.8 percent per year. Every month, the world’s older population increases by 1.2 million persons. More than 80 percent of the increases occur only in developing countries whose growth rate of the aged (3.1%) is 3 times as high as in developed countries [Lakshmi Pathi Raju et al., 2002]26.

It is estimated that by the year 2020 there will be over 1000 million elderly people in the world and 710 million in developing countries. Europe will be the oldest region in the world with 19 percent of elderly out of total population and 24 percent in 2020. By 2020, Japan will have the most elderly with 31 percent, followed by Greece, Italy and Germany with above 28 percent and Switzerland with 27.4 percent. Regional distribution of elderly in 2020 will be 23 percent in North America, 17 percent in East Asia, 12 percent in Latin America and 10 percent in South Asia. By 2020, seven developing countries will have the largest elderly populations: China (231 million), India (145 million), Brazil (30 million),


Indonesia (29 million), Pakistan (18 million), Mexico (15 million) and Bangladesh (14 million). Population ageing in developing countries is associated with persistent poverty and misery [United Nations, 1999].

Based on the studies of United Nation’s, in Asia, the elderly population is growing in both absolute number and as a proportion of total population. The speed of population ageing and the absolute size of the elderly population among countries with low levels of economic development pose challenges. Rapid urbanization and industrialization, which increase the flow of young and female population to urban areas, has the undesirable consequence of the separation of the elderly in rural areas without sufficient support. Fertility decline results in a reduced number of caregivers in a family. Modernization brings changes in values, perceptions, attitudes and expectations that impact on the elderly. Life expectancy and health improvements increase the potential for self-reliance and for contributions to social and economic development among the elderly. This “young old” group (aged 60-69 years) in 1990 constituted 62.65 million persons in China, 38.39 million in India and 7.37 million in Indonesia. These “young old” continue to work in self-employment or non-organized sectors without pensions or social security until they cannot. The “older old”, aged over 70 years, are likely to suffer from physical or mental disabilities of old age and require care.
According to the studies of Higuchi [1996]\(^\text{27}\), in Japan, female elderly are double the number of male elderly for the age group 85 years and above. The female-male ratio at 60 years is almost equal. One out of 10 elderly live alone and 80 percent of those living alone are women. Single-only and couple-only elderly households increased over time. More women are admitted to nursing homes. The greatest problems of the elderly and dementia and being bedridden. Japanese women’s health differs from Western models, due mainly to dietary habits. The ageing process of women after menopause differs from that of men in all countries. In Japan, there are differences in the elderly born before and after the World War II. Before the war women were trained to become a “good wife and a wise mother” and to sacrifice. It is difficult to train these women now to exercise their rights to self-determination, or to accept being cared for by a husband. A major issue for elderly women is poverty. Wives may not be protected by any pension plan. Legal changes in Japan allow transfer of house ownership to a spouse with taxation under certain circumstances. Employment opportunities narrow for older women.

On a global perspective, the proportions of the elderly differ from region to region. 1 out of every 5 Europeans and 1 out of every 20 Africans are aged 60 years or

older. In the Asian and Pacific region, more than 300 million elderly persons are aged 60 years or older. In China, there are more than 114 million elderly people, while in Japan it is 25.1 million, the largest proportion of elderly people among all of the countries in this region. The steady increase of older age groups both in absolute numbers and in relation to the working-age population holds significant implications for many countries. The economic and social impact of ageing populations presents both an opportunity and challenge to all societies [Bisht, 2000]28. A study conducted by Gutierrez Robledo. L.M [1989]29, showed that the proportion of the population in above 60 age group in Latin America as a whole is projected to rise from 6.4 percent in 1980 to 7.2 percent in the year 2000 to 10.8 percent by 2025. The majority of the aged live in urban areas in industrialization and modernization have led to the fragmentation of the extended nuclear families that traditionally provided for the care of the aged. With the move toward nuclear family households and female employment outside the home, many elderly have been forced to live alone or just with a spouse. Despite these changes, the family system is still considered by Latin American governments to have the major responsibility for the care of the elderly. Social spending and investment, already


severely curtailed by the economic crisis in Latin America, is focused on the needs of the young population and the healthy. However, in Asia, research studies revealed that about 60 percent of the world population and population ageing is occurring more rapidly in Asia than in western countries. The group aged 65 years and above will increase from 207 million in 2000 to 857 million in 2050, a staggering increase of 314 percent. The diversity in economic, demographic, religious, cultural and geo-political factors in Asia is unparalleled by any other continent and is, in part, contributory to the rapid rise in population ageing. By 2050, those under 15 years old will have shrunk from 30 percent in 2000 to 19 percent, while those aged 65 years and above will increase from 6 percent to 18 percent. In addition, the gender divide still persists with 100 elderly women to 70 elderly men. These projected demographic changes pose three major challenges viz: how best to address the rising population of the group aged 65 years and above, how to address the shrinking population of the young as well as the working adults and how to address the problems arising from the disproportionate increase in older women than men [Goh, 2005]30. According to Verhasselt [1998]31,


mortality decline has led to a considerably longer life span caused by an interaction of factors, mainly improvements in nutrition, education, hygiene, health care and living standards. Consequently, this higher life expectancy, combined with persistent reductions in fertility, has created a larger number and proportions of elderly in the world. With this trend, cost of social security and pension system has become unsustainable in many developed countries. In addition, the provision of health services and of adapted living arrangements for the elderly is under increasing strain throughout the world. In short, ageing should be considered something that takes place across the life span, instead of splitting the life span into three successive periods of training, work and retirement.

**AGEING - NATIONAL PERSPECTIVE**

The provisional Census 2011 figures indicate that the decade 2001-11 is the first decade in independent India to witness a reduction in both absolute and relative population growth. As per the 2001 census the elderly population of India accounted for 77 million while estimates for 2011 are at 100 million plus. The percentage of old people to total population has increased from 7.5% in 2001 to approximately 8.5% in 2011. A demographic transition is well underway in India, though there are significant differences across states. Fertility rates have come down across the country, and several states such as Kerala, Tamil Nadu and Punjab have reached replacement levels of fertility. Kerala will, in fact, have to contend
with the problem of an ageing population even while several other states will continue to experience a rising share of population in the working age groups. The problem of ageing populations and rising ratios of dependants to earners will also become a feature of some other states, which are moving rapidly through a process of demographic transition to low birth rates and low death rates. It is expected that demographic ageing will be accompanied by a large population of the elderly living in poverty, or at the subsistence level, and will also remain illiterate. The increase in the number of elderly women will be more than men. A World Bank publication [May, 2005], “Old-Age Income Support in the 21st Century - An International Perspective on Pension Systems and Reforms” points out, while the developed world got rich before its people started living longer, in developing countries people are getting older before the countries have got rich. In the context of India this is true and makes the issue of ageing very critical In India, population ageing is occurring at the same time as dramatic economic and social developments are transforming much of the country. Economic development has been accompanied by increasing urbanization; higher rates of rural-urban migration, changing patterns of labour force participation like increased participation of females in organized sector. Traditional family support systems are stressed by the rapidly changing socio-economic scenario. All of these changes have raised concerns about pressure and challenges for the health care systems for
the elderly, for social services and existing pension systems. Responding to these challenges will be one of the most difficult tasks facing government in the first half of this century.

A research study conducted by Swain et al. [2004]\(^\text{32}\), revealed that India accounts for 7.4 percent elderly population i.e., 76.6 million. The highest proportion of elderly among states and union territories is found in Kerala (10.5%) and lowest proportion was found in Dadra & Nagar Haveli (4.0%). The percentage is higher in the southern states (Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Himachal Pradesh, Goa, Maharashtra, Haryana, Punjab, Uttarakchal and Pondicherry) than the Indian average. The evolution of old age structure changes the balance of men and women in the whole population. Sex ratios of older age group are higher in those states. There are 168 districts where elderly population have important implications for government policies such as pension schemes, old age homes, health care and economic growth. The demographic trends revealed that the population growth is more rapid among the older age groups in India. Population ageing in urban areas is likely to strain the joint family system and create

\(^{32}\) Swain P and T.P, Sherin Raj (2004), Demography of ageing in India- state and district level analysis, presented at the international seminar of demographic changes and implications, Department of demography, University of Kerala, Trivandrum, India, Dec.7 -9, P-12.
insecurity among the elderly. Barai’s [1997] study showed that the issues of the elderly are not of immediate urgency, but reflect long-term issues of government planning for human services essential for both physical and moral support of the elderly. World population is growing at a rate of 1.7 percent per year, while the population aged 55 years and older is growing at a rate of 2.2 percent per year. The population aged 65 years and older is growing at a rate of 2.8 percent per year. The world’s elderly are increasing at a rate of 1.2 million per month; almost 1 million of which in developing countries. India’s elderly are expected to increase by 123 million by 2020. India’s elderly were 6.6 percent of total population in 1991. By 2001, India’s elderly represent the second largest share of population, following China’s. High birth rates and high death rates kept the share of elderly at a low level in the first half of the century. Since the 1950s, fertility and mortality have declined and life expectancy has increased. India is likely to have a population of over 177 million by 2025. The concern is over the absolute size of the elderly population. The share of elderly aged over 75 years could be 12-15 percent by 2001. Females tend to outnumber males. It is expected that there will be, respectively, 998 and 981 men per 1000 females aged 60-64 years and over 70 years. The increasing elderly dependency ratio is pushing the elderly into full or

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part-time employment. According to Nair [1989], among the old, the oldest old (80 years and over) stand out in striking contrast from the rest of the older on almost all major attributes-social, economic, psychological and health. The 80plus group differs from 60-79 age groups in several aspects. This group is economically more dependent socially more isolated psychologically more depressed and need health and personal care. The oldest old are the fastest growing segment of the world’s population and are increasing more rapidly than the population of the old persons 60 plus, and also of the general population. The number of the old is expected to rise from 688 million in 2006 to 1968 million in 2050 while those of the 80 plus are expected to rise from 89.4 million in 2006 to 394 million in 2050. Based on the projections, the elderly in age group 60 and above is expected to increase from 71 million in 2001 to 179 million in 2031 and further to 301 million in 2051; in the case of those 70 years and older, they are projected to increase from 27 million in 2001 to 132 million in 2051. Among the elderly persons 80 and above, they are likely to improve their numbers from 5.4 million in 2021 to 32.0 million in 2051. The increasing number and proportion of elderly will have a direct

impact on the demand for health services and pension and social security payments

[Irudaya Rajan et al., 2005]^{35}.

<table>
<thead>
<tr>
<th>Age group (in years)</th>
<th>2000</th>
<th>2015</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
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<td>345</td>
<td>337</td>
<td>327</td>
<td>313</td>
<td>300</td>
<td>285</td>
</tr>
<tr>
<td>% of total</td>
<td>34.14</td>
<td>27.68</td>
<td>24.63</td>
<td>23.08</td>
<td>21.53</td>
<td>20.2</td>
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<td>15-59</td>
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<td>782</td>
<td>865</td>
<td>895</td>
<td>919</td>
<td>937</td>
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<td>63.15</td>
<td>63.16</td>
<td>63.17</td>
<td>63.1</td>
<td>61.26</td>
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<tr>
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<td>77</td>
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<td>167</td>
<td>195</td>
<td>223</td>
<td>248</td>
<td>308</td>
</tr>
<tr>
<td>% of total</td>
<td>7.55</td>
<td>9.56</td>
<td>12.22</td>
<td>13.76</td>
<td>15.3</td>
<td>16.7</td>
<td>20.14</td>
</tr>
</tbody>
</table>

[Based on the statistics of Population Division, Department of Economic and Social Affairs, United Nations Secretariat, Source: Prakash Bhattacharya, 2005].

^{35} Irudaya Rajan S, Sankra Shrama and U.S.Mishra (2005), Demography of Indian ageing 2001-2051.
Rural urban differentials among the aged in India have been noticed by in some of the south Indian states. South India ranks second in proportion of the rural elderly. In South India, which have more female sex composition in the elderly population, Kerala being the first state, followed by Andhra Pradesh, Karnataka and Tamil Nadu. Tamil Nadu is the only state in India which has shown gradual increase in male sex ratio and a rise in the age of its rural population [Jayarani Reddi et al., 1999]36. However, the Indian population has been ageing over the years and the proportion of older people has been growing. But this increase in life expectancy will not be an unqualified success until adequate provision for the care of the elderly is made. At present, the elderly often suffer abuse and, as in any group, women suffer worse than men.

**AGEING IN KERALA**

Kerala finds itself facing a huge human development challenge in the form of its elderly population, burgeoning faster than in any other state. At one time, this population was a showcase for Kerala’s health facilities and living conditions. Now, more and more elderly people are being abandoned or tortured by their families. Many other elderly people have been abandoned in their houses across

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36 Jayarani Reddy P and Usharani (1999), Perspectives on elderly in India: Rural urban analysis in Murali desai and Sivaraju(eds), Gerontological social work in India: Some issues and perspectives, B.R.Publishing Corporation ,New Delhi
the state, uncared for, their presence sometimes undetected till their death. There have also been instances of the elderly being dumped in public places and of going to court against their children. A growing elderly population is a global phenomenon but Kerala’s demographic transition - from a state with high mortality and high fertility to one with a low count in both of these, outpaces that of the rest of the country by 25 years, according to the Kerala Development Report published by the Planning Commission in 2008. Its findings highlight the contrast, which is starkest in the index of ageing, nearly twice as much in Kerala as in the rest of the country. Kerala’s 60 plus population is 5.1 percent of the total in 1961, was just below the national 5.6 percent. Since 1980 Kerala has overtaken the rest and the 2001 comparison is 10.5 percent to 7.5 percent. At the other end of the spectrum, the proportion of the young has declined faster than elsewhere. Among the reasons cited are heavy migration of the young out of Kerala, and the frequent return of the elderly to spend their sunset years [Lakshmi Pathi Raju et al., 2002]. People above 60 constitute 13 percent of the state's population of 3.34 crore compared to the national figure of 8.2 percent, according to the 2011 Census. While India's population grew by 17.6 percent during the past decade, Kerala's growth rate was merely 4.6 percent. For the first time, Pathanamthitta district registered a negative

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Lakshmi Pathi Raju, M. and V. Veankateswaran (2002), The aged- A social development perspective: Implications of social work practice, Social change. ISSN:0049-0857, 32:1, 2
population growth. According to Irudaya Rajan, who has analyzed the demographic transition, population projections for the next few decades indicate a tougher challenge ahead. The 60-plus share of the population rose from 5 percent in 1961 to roughly 8 percent in 20 years, then by another three percentage points in the next 20 years. The next similar jump to 14 percent is projected by 2016. And the 70-plus and 80-plus population, 10 lakhs and 2.9 lakhs in 1991, will multiply to a projected 25 lakhs and 8 lakhs in 2021. In Pathanamthitta district, those above 70 already represent 15 percent of the population. The old-age support ratio of the working-age population (15-59) to the elderly population (60-plus) dropped from 9 in 1961 to 7 in 1991 and is projected to hit 4 by 2021. The growth rate of the elderly population is expected to be the highest in 2011-2021 among the respective rates for the next four decades, By the middle of the century, over a quarter of Kerala’s population will be above 60. Then, each household will have more than one elderly person on an average and a major share of the family income will go into taking care of them [Indian Express Daily, October 2011]. "The famed Kerala model of development with emphasis on public health gave people longer lives. But it has failed in providing quality lives", says demographer S. Irudaya Rajan. The proportion of the elderly dependent population in the state is 57.8 percent, and 35.1 percent of the aged possess no property.
Virtually one in every four Kerala families have a member working abroad, the number of non-resident Keralites has risen to 33.5 lakhs in 2008. Old age homes have mushroomed, from less than 150 in 2000 to nearly 300 now. "Yet there is a huge waiting list," says K. Ananda Kumar of Sai Orphanage Trust which runs the Sai Gramam old age home in Thonnakkal. "Even well-off people want to send their aged parents to old age homes" and there is an acute shortage of labourers. The shortage, coupled with high minimum wages, has attracted a huge influx of migrant daily labourers from Bihar, West Bengal and the North-East. The demographic transition brought about the decline in birth and death rates has resulted in population ageing in Kerala. This phenomenon is inevitable and irreversible and is experienced by all populations that are in the final stages of demographic transition.

The population in Kerala is ageing more rapidly than in other states in India. With around 9% of the population already 60+ as per 1991 census, when all India figures are around 7%, the elderly will form 20% of the State’s population by 2021, while the all India figures will be around 14%. In another 10-15 years Kerala will becomes an “aged society”, a status now enjoyed by only the industrialized countries. But while the industrialized country “aged- societies” have well developed programs of social security and protection for their old, Kerala does not have any measure worth mentioning which will ensure the well being of today’s
youth when they enter old age. Currently 30% of Kerala’s population is under 15 years and 10% over 59 years. This means that these dependant groups are supported by the remaining 15-59 years old. In another 25 years the proportion of children will be reduced by 10% but that of the old will rise by 10%. Thus while the total dependency ratio will remain more or less the same as today the service needs of the society will require a radical shift from child care services to services for old age care that is less paediatric care and more geriatric care and less number of schools and more number of elder care institution. Apart from that while the number of children under 15 will be reduced and the years of care needed for them will remain constant, both the number of the old and the number of years of care needed for the old will progressively increase. Kerala which has passed the stage of demographic transition is now entering the stage of health [epidemiological] transition.
## COMPOSITION OF YOUNG OLD (60-74) AND OLD-OLD (75+)

### IN KERALA ELDERLY (60+) POPULATION (1961-2051)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER('000)</th>
<th>PROPORTION (%)</th>
<th>GROWTH RATE (%)</th>
<th>PROPORTION OF TOTAL POPULATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60-74</td>
<td>75 &amp; OLDER</td>
<td>60-74</td>
<td>75 &amp; OLDER</td>
</tr>
<tr>
<td>1961</td>
<td>793</td>
<td>193</td>
<td>80.40</td>
<td>19.56</td>
</tr>
<tr>
<td>1971</td>
<td>1060</td>
<td>267</td>
<td>79.87</td>
<td>20.13</td>
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<tr>
<td>1981</td>
<td>1519</td>
<td>391</td>
<td>79.52</td>
<td>20.48</td>
</tr>
<tr>
<td>1991</td>
<td>2005</td>
<td>568</td>
<td>77.92</td>
<td>22.08</td>
</tr>
<tr>
<td>2001</td>
<td>2571</td>
<td>871</td>
<td>74.69</td>
<td>25.31</td>
</tr>
<tr>
<td>2011</td>
<td>3355</td>
<td>1287</td>
<td>72.27</td>
<td>27.73</td>
</tr>
<tr>
<td>2021</td>
<td>4889</td>
<td>1735</td>
<td>73.81</td>
<td>26.19</td>
</tr>
<tr>
<td>2031</td>
<td>6604</td>
<td>2565</td>
<td>72.02</td>
<td>27.98</td>
</tr>
<tr>
<td>2041</td>
<td>7408</td>
<td>3700</td>
<td>66.69</td>
<td>33.31</td>
</tr>
<tr>
<td>2051</td>
<td>6392</td>
<td>4800</td>
<td>59.08</td>
<td>40.92</td>
</tr>
</tbody>
</table>

SOCIAL DETERMINANTS

Social determinants means the circumstances, in which people are born, grow up, live, work and age as well as the system put in place to deal with illness. In India as in the other oriental and developing countries, the family has been a well knit social institution that met the social, economic, and emotional needs of its members. Older people enjoyed a sense of honour and authority, had the responsibility of the decision making in family and community. The family with its extended structure considered sometimes of three generations parents, children, and grand children - a stable unit. In India, where the family has an obligation to care for the elderly, the consequences of rapid declines in fertility and mortality on elderly makes living arrangements an important issue in the field of population and development. A study of Yi.Z et al., [2002]38 revealed that lower fertility, higher mobility, change in attitude about family structure and function, increase in life expectancy, especially mortality declines in later life. The population of China, which consists of more than two fifths of the world total, is ageing at an extraordinarily rapid pace. There are important interactions between population ageing, changes in the living pattern of the elderly and the need for long-term-care service. Such interactions are directly related to community and family support systems and public policies.

Changes in dietary and sleeping habits, perception of adequacy of food intake, and the food items consumed in a meal, opinion on worries, feeling of depression, experience of a loss of interest etc contributes detritions of health of the elderly. To maintain good health a person should be free from habits like tobacco smoking, chewing, excessive alcohol consumption etc. Such habits are not only expensive to maintain but also results in various psycho social health problems. People are able to withstand the effects when they are younger but as age advances there is a deterioration of the capacity of the body to resist their ill effects. The elderly face a lot of health problems which many arise out of their past and present addictions.

Murphy’s [1995]\(^{39}\) research on old age revealed that at an advanced age due to restricted physical activity the majority of elderly change their living habits especially their dietary intake and duration of sleep. There is a general perception in the community that since the old led a sedentary life they should eat less food, have more rest and develop more religious interests to occupy them. Nutritional status of a person significantly influences his/her health status and more so in the case of the elderly. The subjective perception of the sampled elderly on their nutritional status while assessing almost all the total elderly irrespective of their

group responded that their intake of food was nutritionally adequate. No wide sex differentials in the perception on nutritional status were observed. Marriage contributes to health through emotional, financial and behavioural factors and singles scored worse than married on most self-reported health dimensions. The exception was married persons aged less than 25 years. Married and single persons had the largest differences in psychological measures. The smallest differences were in physiological measures. The married state was more protective for men than women. Formerly, married people scored poorly on psychosocial, stress, smoking and drinking factors. Among the institutional population, long term illness was greater. There was a long term association between marital disruption by spouse, death or divorce and limiting long-term illness. This relationship was stronger for divorced women than widowed women. People living without a nuclear family had the highest long term illness rates.

Analysis of data of Martin [1998] from survey of the elderly conducted on the socioeconomic, cultural and demographic determinants of living arrangements of the elderly in Fiji, Korea, Malaysia and the Philippines revealed that the availability of kin, spouse and children plays an important role in determining the living arrangements of the elderly. Living in an urban area in Philippines is

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40 Martin L.G(1998) , Determinants of living arrangements of the elderly in Fiji,Korea,Malasia and Philippines, Presented at the annual meeting of the population , Association of America,April21-23,Published in Demography 26(4) 627-643,Nov-1989
positively associated with living with children, but home ownership and being self supporting are negatively associated with living with children in several countries. Education and health of the respondent have little effect on living arrangements.

A study conducted by Indira Jai Prakash [2001] showed that older women are likely to have more health problems, are less likely to be financially independent and have less power and status compared to old men. In India because of the migration and urbanization, rural areas will become pockets of poverty, where living arrangements also change, leading to problems in providing for security to elderly.

A study on the living arrangements of elderly revealed that except a few (7%), almost all elderly live with their children. These few are living by themselves in single household because of not having any children. Among the others, 73% live with their sons whereas 20% live with their daughters [Dharmalingam et al., 2001].

More elderly are now living in joint households, with one or more married sons and some other relatives. However, the rest of the older persons either live alone or

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41 Indira Jai Prakash (2001), Health concerns of older women in India, Research and development journal, Help age India. 10:3

with a spouse and also in pilgrim centers and old age homes [Shah et al., 1997]\(^{43}\). The results of a study conducted in Tamil Nadu in elderly revealed that only 9.16% of respondents lived alone and 18.33% lived with their spouse only. Majority of respondents (77.50%) lived with their children (38.34% were couples and 34.17% were single) and 95% lived in their own house [Sundhar et al., 2004]\(^{44}\). It is generally reported that the respondents have maintained friendly relations with their grown-up-children [Jayashree, 1999]\(^{45}\). More elderly female (3.49%) are living alone compared with males (1.42%). In other words, only 6% of elderly in India are living in a family where their immediate kinship is not present in the household [Irudaya Rajan et al., 2003]\(^{46}\). A study conducted by National Sample Survey Organization revealed that there is no significant difference in the living pattern in both rural and urban areas. Elderly mostly stay with their adult children and about 7% of men and 11% of women were supported by their spouses.

Approximately three-fourths were supported by their own children and about 8%

\(^{43}\) Shah B and A.K Prabhakar (1997), Chronic morbidity profile among elderly, Indian Journal of Medical Research, 106, pp.265-272

\(^{44}\) Sunder P and R.Bakshi (2004), Impact of social change and elderly women of urban Punjab, Research and development journal, Help age India,6:3


\(^{46}\) Irudaya Rajan S and S. Sanjay Kumar (2003) , Living arrangements among the Indian elderly, Evidence from national family health service, Economic and political weekly, 38:1, January 4-10, pp.pp-75-80
and 12% of elderly men and women, respectively were supported by others [National Sample Survey Organization, 1991]. A study on the level of life satisfaction among the elderly people according to their age and type of family found that the younger respondents had greater life satisfaction and those who were living separately from their children were more satisfied than those who were living with their married or unmarried children [Hosmath et al., 1993]⁴⁷. Older people generally have lower incomes than their younger counterparts, with women who are unattached (e.g., as a consequence of divorce or bereavement) being particularly vulnerable to poverty. However, improvements in women’s educational and employment opportunities may result in improved financial circumstances for older women in the future.

**MENTAL HEALTH AND SOCIAL WELL-BEING**

From a population health perspective, the health status of individuals, subgroups within the population and the population as a whole is the result of complex interplay among various factors. These factors include determinants of health like, individual characteristics, the physical environment, and social and economic factor. And also the changes that occur as part of the natural ageing process, such as retirement, changes in income, physical changes and changes in

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⁴⁷ Hosmath S, Revati Dr, V. Gaonkar, P.K Khadi 1993, Life satisfaction during later years, Man in India, 73:3 pp.229-232.
social support networks, which includes care giving, spousal bereavement, social isolation etc. Some older people may welcome retirement as an opportunity to engage in activities that had been set aside while working and / or raising a family. For others, retirement may signal things like significant reduction in income, narrowing of their social network and support system, negative change in self-image and identity, and the recognition of their mortality.

Mental Health of the elderly is an important area in understanding their overall health situation, it is generally expected that the elderly should be free from mental worries since they have already completed their share of tasks and should lead a peaceful life but often the unfinished familial tasks like education of children, marriage of daughters etc becomes a source of worry for a period of time. According to Siva Raju [2002]\(^{48}\) a very high proportion of the elderly had to worry over a lot about their problems [63.3%], the poor elderly comprised a very good proportion [70%] of those with worries. However based on Sudha Katyal’s [1999]\(^{49}\) research on the old people living with their families have cordial relation with their children and spouse, their social interactions are good and they have a

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\(^{48}\) Siva Raju S. (2002), Health of the elderly in India, Issues and Implications, Research and Development Journal, Help age India, 8:1

\(^{49}\) Sudha Katyal Dr. and Banal Sector (1999), Old people are happiest in the family, Social Welfare, 45:1.
positive frame of mind. But this cannot be said about people living in institutions as they do not have cordial relations with their children and spouse, they do not feel good about themselves and they do not have peace of mind. Older people are often victims of mental disorders on account of their fear about death, feelings of dependency, anxiety, boredom, loneliness and helplessness. The treatment and the diagnosis of psychological problems are not yet prioritized. Many old people suffer from mental illness, which their families may not even be aware of. Every human being has emotional attachment to their own kin’s and creed’s. The socio-biological view considers the phenomenon of social support to be deeply rooted in our biological inheritance, providing a central influence in our success as a life form [Richard E. Pearson’s 1999]. One of the major psychological problems of elderly women is loneliness as most of them are widowed and also due to mobilization. The concepts of loneliness with particular reference to old age suggested that successful treatment of loneliness in life reduces the risk of more serious complications, such as feelings of meaninglessness, decrease in social contacts, low self-esteem and trust [Asgarali patel et al., 2000].

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50 Richard E. Pearson (1999), Counseling and social support perspectives in contemporary theory, research and practice, Sage publications, New Delhi

51 Asgarali Patel and Aruna Broota (2000), Loneliness and death-anxiety among the elderly-The role of family setup and religious beliefs: Research and development journal, Help age India. 6:3 p-28
In Kerala, wherein the highest proportions of elderly is found to be present and has several social security schemes, 73.6% of the rural females and 76% of the urban females are fully dependant on others. This shows that vulnerable elderly women are even in Kerala known for its high order of social investments. The aged face psychological problems like decreased vitality, loss of works, reduced income, isolation, age associated disability, lack of supervision, deteriorating mental function which often leads to psychological problems [Sunil goyal et al., 1999].

The rural aged were found to suffer from anxiety, alienation, maladjustment, fear, tension, feeling of insecurity, worthlessness dependency, loss of memory, vision, hearing, giddiness and body pain [Selvi 2001].

Successful treatment of loneliness in old age reduces the risk of more serious complication such as feeling of meaninglessness, decrease in social contacts, self contacts, self esteem and trust. Loneliness among the aged can be reduced by acceptance, reflection, social interaction and increased activity. Loneliness has been conceived as a problem for everyone and the elderly experience more loneliness because their spouse might be deceased, their friends might have either moved away or died. Their children might be in distant places and they themselves


53 Selvi (2001), Socio-economic conditions and health profile of the rural aged, M.Sc dissertation in home science extension, Gandhigram rural University.
might be subject to physical disabilities. Industrialization and urbanization have weakened the traditional joint family setup in India and elderly persons are least or not wanted in the social set up of a family or society at large resulting in loneliness and anxiety about death [Weeks, 1994]54. An old person begins to feel that even his children do not look upon him with that degree of respect which he used to get some years earlier. The old person feels neglected and humiliated. This may lead to the development of psychology of shunning the company of others, loneliness in turn may give rise to depression and may eventually lead to worsening of sickness [Chowdhry, 1992]55.

A study on the psycho-social problems of the retired revealed that age had a significant positive relationship with psychological distress and significant negative relationship with attitude towards physical changes [Prema B. Patil, 2000]56. The retirement process may involve passing through a series of phases, the precise nature of which is influenced by a person’s reason for retirement and the age of retirement. Older people who have inadequate income and are in poor health, or need to adjust to stress such as the death of a partner have the most


56 Prema B. Patil (2000), Psychosocial problems of the retired, Social welfare, pp.18-25
difficult time adjusting to retirement. Retirement also impacts a person’s partner and may require both people to adjust to changing roles and expectations. Majumdar [1985]\(^\text{57}\) states that during old age there is a feeling of loneliness, perception of void in life, financial problem, loss of social status accompanied by a sense of alienation and helplessness. Loneliness increases gradually with age, is more common in women and is highly correlated with physical health. Other risk factors include low economic status and a lack of security and social networks. The absence of supportive friendships appears to be a major determining factor for loneliness. Further, widowed men and women report higher levels of loneliness and depression than their married counterparts. However, in older adults who are married vs. those who are single and among those who have children vs. those who are childless, perceptions of well-being are reported as similar. Psychological problems such as loss of job, anxiety, depression, loneliness, loss of social support, neglect, abuse and exploitation were faced by the elderly [Hema Nalini et al., 2002]\(^\text{58}\). In a study conducted in Tamil Nadu among the aged population, the per capita income was found to have negative and significant relationship with

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\(^{57}\) Majumdar Vandana (1985), The end of the road, Hindstan times, Sunday magazine, Oct 6\(^\text{th}\) 1985, p-1, col.1-8

\(^{58}\) Hema Nalini V and S. Meera (2002), Emerging trends, issues and needs of the elderly in the context of Globalization. Research highlights, Published by Avinashilingam Deemed university 12:2, pp-104-109
depression and the number of children was found to have positive and non significant relationship with depression [Patil et al., 1998]\textsuperscript{59}. Gradually elderly people develop a feeling of uselessness and purposelessness. Opportunities should be made available to the aged to fulfill their varied kind of needs adequately in the opinion of Surendra Singh [1997]\textsuperscript{60}.

In a study on the physiological problems of elderly, it was found that 88 percent of old people were suffering from mental tension. A good majority 74.5 percent were found suffering from fear of death and 71.7 percent were found suffering from the feeling of dependency, 70 percent were found suffering from anxiety, 62.5 percent were found suffering from the feeling of loneliness, 60 percent were found suffering from the feeling of helplessness, 52.5 percent of old people were found suffering from depression, 52 percent were found suffering from the feeling of uselessness. A study conducted among old people showed that 70 percent of old people did not know whether they were suffering from any whims. 16 percent said that they were not suffering from any whims while 14 percent of old people said


\textsuperscript{60} Surendra Singh (1997). Psycho-social problems of the aged in the contemporary Indian society, Changing Indian society and status of aged, Manak publication, New Delhi
that they were suffering from whims [Hitesh Patel, 1997]. Depression is increased with age among elderly people [Prema.B.Patil, 2000].

It is widely believed that depression is common in older adults, but in fact prevalence rates vary widely. Mild depression and situational depression (i.e., depression in response to physical or social losses) are more frequent than major depression. Depression is more frequent in older women and people over 85. Depression in older adults may manifest differently than in younger people, requiring different approaches to identification and treatment. For example, signs and symptoms are often physical rather than emotional, and may include changes in sleep patterns, decline in appetite, weight loss, constipation and minor aches and pains. Depression in older adults is associated with increased morbidity and mortality. This requires care, because symptoms of depression in older people may overlap with the symptoms of other conditions or may be seen as a normal part of ageing, resulting in the depression’s being overlooked [Centre for addiction and mental health-CAMH-Practice guidelines for mental health promotion programme, Older adults 2010-2011].

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61 Hitesh, Dr. Patel (1997), Mental problems of ageing and care of them by their family. Research and development journal, Help age India. 4:1

62 Prema, B. Patil (2000), Psychosocial problems of the retired, Social welfare, pp.18-25
A study on the psycho-social problems of aged in the Indian perspective from central and state services belonging to urban and rural area highlighted that elderly people are facing a multitude of problems. As people grow older, they usually become less interested in life and more concerned about death. When health deteriorates, they tend to concentrate on death and become pre-occupied with it. This is in contrast with the perception of life by younger people. The study found that habit, gender and caste play significant role in the adjustment of aged people. It was also found that rural aged were more adjusted than urban aged [Rafique Alam et al., 1997]. A study on the role of adjustment and status in aged conducted among the Bengali Population, has brought out that feeling of isolation was high in female and they had poor life satisfaction. Income seems to be a very important factor influencing adjustment. Widowed older women being dependant on families, face several problems in adjusting to others [Bannerjee Mrinmayi Tyagi et al., 2001]. Further research carried out to estimate the prevalence of dementia, one in a rural and other in an urban area of Madras, India found that the prevalence of dementia was 3.5 percent in the rural and 2.7 percent in the urban sample and the same increased exponentially with age. Rural prevalence estimates

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63 Rafique Alam and M.G Hussain (1997), Psycho-social problems of ageing, Indian perspective, Changing Indian society and status of the aged, Manak Publication, New Delhi

were higher than the urban estimates. Though gender differences were negligible in the rural setting, dementia rates were significantly higher among urban males in contrast to urban females [Rajkumar et al., 1998].

**NUTRITION**

The productivity and longevity of an individual is dependent on both external and internal environmental factors. Ageing is a natural process and is invariable. As people age, bodily functions and physical capabilities become less efficient. Physiological ageing is a continuous process and holds an implicit recognition of the key elements like disease and ability to function. The health of an individual is a critical indicator of the body’s nutritional status. A proper diet or nutrition is a critical and essential need of the living body, which has to be satisfied for the individual to function normally. Nutrition in the aged is an outcome of their earlier food habits, food choices, food likes, dislikes and also the consumption pattern within the family. It is also important that their diet during illness, food beliefs, food restrictions and digestion problems during their old age are having major influences on the occurrence of disease. With the industrialization of nations, the era of “fasting” has now changed to the era of “feasting”. It has been proven beyond doubt that “rich” diets may result in poor health. In the olden days

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lack of food was the cause of many early deaths, now it is the excess of food which results in reducing the life span of many individual to myocardial infarctions like stroke, cancer etc in the young. Diets are the most important factor in controlling the ageing process even at its onset. Numerous studies throughout the world are bringing a large number of findings which indicate that nutrition possibly holds an important role to the solutions of the riddles of ageing. There are already suggestions based on epidemiological studies that with certain type of diet, a group of people have a very long and healthy life. Japanese nutritionists have probed the dietary pattern of the Japan centenarians and have brought out many important findings, of which rice and fish have been considered as extremely important part for a healthy ageing and long life. One remarkable and unanimous finding in experimental and epidemiological studies in man is that calorie restriction prolongs the life and at the same time prevents the onset of many pathological disorders. The nutrients least adequately supplied in the diet of the aged Indian are calcium, iron, vitamin A, riboflavin and niacin. Health is a key contribution factor to quality of life and is therefore closely associated to low socio-economic conditions [Bali 1997].

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HEALTH PROBLEMS

Physical changes and increased vulnerability to chronic health conditions are often seen as the hallmark of ageing, and can significantly impact older people’s psychological and social well-being. Health problems may limit older people’s mobility, thereby narrowing their social contact and potentially precipitating mental health problems. In addition, studies about ageing shows that, most health problems were associated with lower education, lower income, less knowledge about health, poorer health practices, lower perceived health status and lower self efficacy. By contrast, older people who felt they were healthy and self-sufficient had fewer health problems, greater knowledge of health issues, and better health practices.

Human organs gradually diminish in function over time although not at the same rate in every individual by itself, this gradual diminution of function is not a real threat to the health of older people unless they fall prey to some disease. Diseases are the chief barriers to extend health and longevity and when they accompany normal changes associated with logical ageing maintaining health and securing appropriate health care becomes especially problematic for older person. Health in simplest term is defined as the absence of disease or illness. Health is not only a biological or medical concern, but also a significant personal and social concern. In general, with declining health, individuals can lose their independence, lose
social roles, become isolated, experience economic hardship, be labeled or stigmatized, change their self-perception and some of them may even be institutionalized [Ketshukietue Dzuwichu, 2005]67. Morbidity pattern among the elderly varied from country to country. Chronic conditions which produced infirmity and disability became more common in old age.

The major ailments reported by the elderly are visual impairments, nerve disorders, hearing impairment, diabetes, heart diseases and hypertension, skin diseases, cataract, asthma etc. Many of the elderly are suffering from more than one combination of ailments. These diseases prevent many of the elderly from attending to their normal work and even affect the movement within as well as outside the house. Some chronic diseases like visual, hearing impairment can be limiting their movements but is not life threatening, whereas diseases like heart disease, hypertension, stroke, etc can lead to fatal diseases. The demographic picture of the population in any country is changing very rapidly. The problem of old age is a significant human and social problem in recent times. The problem of ageing is found in almost all the countries of the world. A study carried out by Hitesh. N. Patel [1997]68 revealed that 88% of old people were found suffering

67 Ketshukietue DzuwichU(2005), Health problems of the aged among the Angaminagas, Journal of human ecology, 17:2

68 Hitesh, Dr. Patel (1997), Mental problems of ageing and care of them by their family. Research and development journal, Help age India. 4:1
from mental tension, because of the ill health of self or their life partner, bedridden self or life partner, conflict with other members of the family, contradictory life values, economic dependency on others, lack of adjustment in old age and trouble in passing time. Not only this, but social factors like widowhood and poor income may also intervene to change the diet of the elderly, there by leading to potential health problems. The changes like greying of hair, loss of hair, vision and hearing impairment, wrinkling of skin with loss of elasticity and dryness of skin etc are not strictly chronologically age related. In other words these changes might appear in individuals who might be 50 or they might not appear in an individual who is 70. Their appearance varies from one person to another. Old age in general is associated with multi-dimensional problems. The problems which are associated with age and the care of elderly are not exclusively the problems of social, cultural and economic ramifications, rather they include health and medical problems also that affect the life of a community as well paradoxically, it is the advance technology of medicine, which in turn facilitating contraception and reducing morbidity during the second half of life has eventually increased the prominence to the needs of the elderly. Health status is an important factor in deciding the quality of life of the rural elderly along with certain related factors such as service availability, awareness and accessibility [Vijaya Kumar, 1998]69.

69 Vijayakumar S, (1998), Health services of the rural elderly, Social change,28:4
The extension in life expectancy has been accompanied by an increase in the level of chronic diseases, including heart disease, diabetes, hypertension and arthritis. Also of concern is the weakening of traditional informal support systems, both community and family and the marginalization and elimination of the elderly’s social and economic roles [Eldermire, 1997]. Analysis of the data on persons 65 and over years of age drawn from National Sample Survey, Sample Registration System and Censes of India revealed that, gender is a very important variable that influences quality of life at all ages. Of the population over 70 years of age, more than 50 percent suffer from one or more chronic conditions. Lack of social support, breaking up of joint family system, changing life-styles, all aggravates health and nutritional problems in the elderly age group. While elderly people in India may have reasonable access to family care, they are inadequately covered by economic and health security [Susuman, 2005]. Understanding the various factors that determine the perceived and actual health status will help in evolving suitable and effective measures for improving the health status of the elderly in our country. Important factors like age, marital status, educational status, perception on living

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71 Susuman A.S (2005),The health of the aged in India: Emerging problems, Presented at the 2nd Indian association of social sciences in health, National conference on Globalization and health equity , Bhaba atomic research centre,Mumbai,Feb:4-4, p-20
arrangement, perception on economic status, degree of feeling idle, addictions, type of health care received during ill health and the habit of taking medicines etc. have an important role in the assessment of the health status. As age advances, a person becomes more vulnerable due to psychological changes. Sex wise data showed that males of different age groups vary considerably in the perception of their health status. Those who perceived their health condition as good constituted as high as 54% among the age group of 60-64 years and such a positive perception of health status was represented by only 35% of the elderly in the 65-69 years and this proportion further came down to 25% among the 70+ years [Siva Raju, 2002].

Based on the study of ageing and health conditions in rural India conducted by Yadava et al. [1996], 267 persons over 60 years old from Uttar Pradesh, Varanasi district were interviewed, Overall 37 percent of men and 70 percent of women rated their health condition as "bad". The incidence of illness after age 60 years was 77 percent among women and 61 percent among men. Most common were chest problems such as asthma, tuberculosis and bronchitis. The percentage of unhealthy persons was slightly lower among illiterates and those with a university

72 Siva Raju S. (2002), Health of the elderly in India, Issues and Implications, Research and Development Journal, Help age India, 8:1

education than men and women with primary or middle school educational levels. These educational differences are presumed to reflect class-based occupational histories. In general, those with middle levels of education were employed in household industry or businesses with high exposure to disease. Men and women with unsatisfactory, conflictual family relationships also experienced increased health problems.

Regarding the condition of exposure of old age to disease of any kind, the situations are quite different in various backgrounds. The prevalence of the disease increased significantly with age among the males and was related to socio-economic status or smoking. Chronic bronchitis was also more common among males. While the incidence of the disease was not related to marital status, it was inversely proportional to economic status and significantly related to smoking. More men are generally smokers [Purohit et al., 1974]^{74}.

In most situations in society compared to the young old [60-69 age] middle old [70-79 age], the oldest old [80 years and over] suffer more from at least the following major ailments. 1- Majority of them having more than a disease like rheumatism, arthritis, diabetes, hypertension, cardiac problems. 2- They are having less mobility, many of them are bedridden and are suffering from terminal illness.

and physical disabilities. 3- Depression at best and dementia at worst. 4- They are more likely to be the victims of accidents or falls and consequent bone fractures. 5- Nutritional deficiency is found more among them. 6- Many of them having problems in getting adequate care giving. 7- Loneliness, isolation and being cut off from social bonds. 8- Abuse and neglect and even abandonment, especially if they are unhealthy, physically disabled, mentally handicapped and are poor [Nair P.S.1989]. The findings of the study conducted by Nath D.C [2000] revealed that socioeconomic, demographic and ecological factors have an important role in the health of old people. Most elderly people could have better health if they received better health care and followed healthy life styles. A study on the socioeconomic and health status of the aged in the rural areas of Karnataka revealed that the incidence and prevalence of chronic as well as non-chronic diseases is obviously high among the elderly. The major chronic diseases include respiratory diseases, loco-motor illnesses and hypertension. The duration of illness is comparatively longer among males. The majority of the aged have been treated by private physicians. Since the social and health problems of the elderly are peculiar and


considering their growing population size, a huge infrastructural development will be necessary to take care of their health and social needs. This is even more important in view of the reduction in family size, the nuclearisation of families and the erosion of family kinship ties even in rural areas of the country [Nair, 1989].

There are more women than men at any elderly age group. Depression and osteoporosis are the commonest problems in elderly subjects. Some problems specific to males are hypogonadism, erectile dysfunction and enlargement of prostate and in females are post-menopausal disturbances, urinary incontinence and breast or lung cancer. However, problems of special concern in both male and female elderly are malnutrition, falls and cognitive dysfunction. The impact of old age on women is different from that of men because of differences in their status and role in society. This is specially so because proportion of widows in 60+ age group is considerably higher than of widowers. Sexuality is often overlooked as a health status particularly in elderly women. Clinicians should recognize the importance of sexual functions to the overall health of older persons particularly women. Religious participation and involvement are associated with positive mental and physical health. Family life is the key to the health of elders, especially older men. Lack of social support increases the risk of mortality and supportive

relationships are associated with lower illness rates, faster recovery rates and higher levels of health care behaviour [Dhar, 2001]78.

In a WHO study it was revealed that morbidity due to cancer, coronary heart disease, diabetes, hypertension and arteriosclerosis had increased while there was a decline in morbidity among the elderly from conditions like skin diseases, visual and hearing handicaps and multiple orthopedic problems. In addition a study of 658 elderly in a rural area in Trivandrum found 20.15 percent of males and 68.1 percent of females widowed. The women were found to be poorer and suffering a lot more morbidity than men, in spite of their greater life expectancy. The diagnosed illness included hypertension, arthritis and joint complaints, chronic bronchitis, diabetes and coronary heart disease. Chronic bronchitis and diabetes were more among the males whereas hypertension was more prevalent among the females [Vijayakumar 1994]79.

From the point of view of Pappathi et al. [2005]80 on psycho-social perspectives, problems and strategies for the health and welfare of the rural aged females, it is

78 Dhar H.L (2001), Gender, ageing, health and society, Journal of the association of physicians of India, pp.1012-1020

79 Vijayakumar K,(1994), Life and health of the elderly in a community in transition, Results of a survey in Trivandrum city, Health policy and planning, 9:3,pp-331-336

80 Pappathi K and M.A,Sudhir (2005),Psychosocial characteristics and problems of the rural aged Research and development journal, Help age India,11:1
generally felt that a majority suffered from joint pain, hypertension and chest pain. A study on the nutritional and health problems of the aged found that the rural aged suffered from nutritional, psychological and other problems, when compared to urban aged. The aged employed privately and those self-employed had more health problems than not gainfully employed persons. In general, the male members were found to be literate, economically independent and had less physiological and nutritional problems when compared to their female counter parts, when the literacy level, income level and employment status improved, they seemed to have better health [Vasantha et al., 1998]. The most prevalent illness among the aged are loss of eye sight, arthritis, tuberculosis, asthma, skin diseases, urinary infections and general body pain. Very few have reported that they are living in good health [Lalitha, 1998].

It is generally perceived that general intake of medicines by the elderly make them feel that their health status is at a lower level. It is observed that among the total elderly, that those who are regular in their intake of medicines perceived their health status at a lower level (72%) as compared to those who are not taking medicines. Problems of joint pain are a common feature among the elderly in

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81 Vasantha and Premakumar (1998), Nutrition and health problems of the aged, Paper presented at national seminar on Psycho-social characteristics, problems and strategies for the welfare of the aged in rural India, Department of applied research, Gandhigram rural institute, March 11-13

82 Lalitha.N(1998),Most deprived of the deprived-The rural aged, Social welfare,45:10,13-17
Kerala while disease like cough and hypertension was also reported by a sizable section of elderly population. The prevalence rates are 480, 204 and 170 for joint problems, cough and hypertension respectively. The chronic disease such as piles (53%), heart disease (40%) and urinary problem (37%) are also prevalent in the population. The age wise differential showed that the chronic diseases such as cough, joint problem are common in the oldest old aged category. Heart disease and hypertension are more frequent among the young old. Sex wise differentials are clear with the burden of joint problems and hypertension being more among economically dependent persons than their counter parts who are independent or partially dependent on others for their livelihood [Dillip, 2001].

Another study found out that joint pain as the number one problem followed by failing eyesight and cardiac problems. It is interesting to note that in spite of high level of prevalence of various diseases among the elderly 63% of them reported that their overall health status was good [Hema Nalini et al., 2002].

In a different context, health condition of the aged population of Allahabad city was found that the health of the aged male is better than that of the females. Most of them suffer from more than one health problem. The most common illnesses are

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83 Dillip T.R (2001), The burden of ill health among the elderly in Kerala: Research and development journal Help age India. 7:2, pp.40-50

84 Hemamalini Ramakrishnan (2002), Ageing population, policy responses and challenges, 14th global conference of actuariesFeb19-21, Mumbai.
abdominal problems, cold, cough and fever. Almost all the respondents of this study have gone for allopathic treatment for their major ailments, more than half the patients obtained treatment from private hospitals, three fourth from government hospitals and only a very small minority from other sources [Tripathi, 2001]85.

However, it is true that the attitude, both professional and general seems to be that the illness was an essential part of old age and most of the illness of the old have no cure but only palliative [Nayar, 2000]86.

The health problems of elderly tend to increase with advancing age and very often the problem aggravated due to neglect, poor economic status, social deprivation and inappropriate dietary intake. Large majority of landless rural aged are suffering from one or the other health problem and physical disabilities. Indigestion, anemia, hypertension, skin diseases, poor eye sight, respiratory problems, urinary / kidney troubles and diseases of joints with varying degrees of affliction were some of the physical ailments they were suffering [Chandra Paul Singh, 2005]87.


86 Nayar. P.K.B. (2000), The ageing scenario in Kerala, A holistic perspective, Research and development journal, Help age India.6:2

87 Chandra Paul Singh, Dr. (2005), Social - economic status and health conditions of handless rural aged in Haryana, Research and development journal Help age India. 11:1
Seriously considering the disease pattern of the retirees, hypertension is rated the highest, diabetes is rated second highest and problems with ears and eyes as third highest. These in most situations are followed by muscular pain, frequent colds, insufficient sleep, dental, throat and heart problems [Jayashree, 2004]\(^{88}\). Another study on the health status of elderly revealed that only 20\% of senior citizens did not suffer from any diseases, 22.5\% of each were suffering from hypertension and arthritis, 7.5\% each were suffering from asthma and diabetes mellitus, 5\% were found to have heart disease and anemia and 10\% of elderly were suffering from other disease’s [Suresh, 2002]\(^{89}\).

The Indian Council of Medical Research (ICMR) has attempted to compile data on morbidity from different sources. The total number of blind persons among the older population was around 11 million in 1996, eighty percent of them due to cataract [Angra et al., 1997]\(^ {90}\). The consequences of blindness are not limited only to physical disability that ensues, but also impinge on economic, social and psychological domains of the affected individual’s life. Nearly 60 percent of older people are said to have hearing impairment in both urban and rural areas. The hearing loss and resultant communication problems adversely affect the well being

\(^{88}\) Jayashree (2004), Ageing men and health concerns, The journal of family welfare 50:1

\(^{89}\) Suresh K.N(2002),The old age problems and care of senior citizen, Nursing journal of India

of older people [Kacker, 1997]. An estimated five million were diabetic and the prevalence rates were about 177 per 1000 for urban and 35 per 1000 for rural elderly people. Crude prevalence rate of strokes is estimated to be about 200 per 1,00,000 persons. Older persons surviving through peak years of stroke (55-65 years) with varying degrees of disability are already a major medical problem [Dalal, 1997].

Finding on disabilities and death surveys in rural areas, shows that the elderly suffer from conditions specific to this population that are accumulated over the life cycle. The major causes of death for persons aged over 50 years are respiratory diseases (18%), diseases of the circulatory system (10%), disorders of the central nervous system (12%), senility (almost 50%) and other causes (12%). 75% of respiratory deaths are due to bronchitis and asthma. Air pollution causes chronic respiratory damage. The most vulnerable people are the elderly, children, smokers and those with chronic respiratory problems. Almost two-thirds of circulatory system deaths are due to heart attacks. Paralysis is a common cause of central nervous system culminating in ultimate deaths. Cancer accounts for almost 50 percent of other diseases. Medically certified deaths among those aged over 55

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91 Kacker S.K,(1997), Hearing impairment in the aged, Indian journal of medical research,106,pp-333-339

years show the major causes as heart attacks, ill-defined conditions, infectious and parasitic diseases, respiratory system diseases and neoplasms. Compared to mortality among the working-age population, the elderly suffer more from respiratory diseases and paralysis, especially men. 45% of the elderly have some chronic disease. 80% of the chronically-ill suffer from joint problems, coughs and high blood pressure. Elderly morbidity follows a residence and gender pattern. Around 10 percent suffer from disabilities. Blindness is highest among the elderly, especially women. Women experience conditions related to menopause [Rao et al., 1998]93. Meena et al. [1995]94 have reported from their research that health problems of the elderly are subjected to a kind of shift from communicable and infectious diseases to non-communicable disease. Poor nutrition and lack of clinical care are known to be important factors explaining the health profile of the persons. The health conditions of elderly are making a great demand for geriatric services. There is an unmet need for health care and social security services for elderly. Hence there is a need for a community based health care strategy to care and protect the welfare of the aged in the country. Old age manifests different

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diseases and these diseases have a compound effect with each other. Hence there is a need to assess the living conditions of the older population and the care and support available to them in order to develop appropriate social security and health care measures for the vulnerable elderly population.

The dimension of the problems of the elderly and enormous increase in their absolute numbers in India, warrants study of their health and medical needs to formulate strategies at various levels to improve functional independence and quality of life through reduction/alleviation of morbidity, by recognition of the multiplicity of problems, atypical presentations, rapid deterioration, irregular or erratic intake of medicine and medication practices by the elderly and the possibility of iatrogenic diseases complicating further the clinical picture.
DISABILITIES

The association between increasing age and increasing disability has led to a negative image on ageing. Some gerontologists have introduced the term “successful ageing” emphasizing the point that not all ageing is negative. This, however, has led to the possibility of stigmatizing older adults who have a disability. Measuring the prevalence of functional disability among older people is extremely important. The number of older people is projected to increase in both the developed and the developing countries. The incidence and prevalence of functional disability are high among older people and they are higher at older ages [Kovar, 1991]95. Various scientific approaches in the area have proved that logistic regression analysis shows that the likelihood of physical disabilities increases significantly with an increase in age. Elderly persons who live in urban areas have significantly lower proportion of physical disability as compared to their rural counterparts. It was also observed that elderly people who belong to the higher socio-economic class were found to have lesser disabilities [Audinarayana et al., 2002]96. Visual

95 Kovar M.G (1991) , Functional ability and need for care, Issues for measurement research, Vital and health statistics,5:6,97-103

impairments are reported in 11 million Indians, while 38 million have hearing impairments. In India certain recent developments such as industrialization, high cost of living migration of children to other places, disintegration of joint family, etc. have given rise to some new kind of stresses and strains which have made the position of the aged more problematic. India has been in the past and remains today a predominantly agrarian society. The concentration of older people in the country side was even more striking with over 80 percent in rural areas. However, the process of urbanization in India is accelerating. It is not surprising that the rural population is older than that of the urban areas. The social implications of this migration can be profound. The combined effects of changes at the level of the community and the gradual rural decline and the corresponding increase in urban areas are presenting great challenges to India’s graying population. At an individual level the process of migration usually begins with a single person often a man moving in to the city. His wife and children often having his parents behind join him later. Thus a new house hold is formed which formed within to a joint households with the arrival of sons and wives.

A study conducted by Shubha Soneja et al. [2001]97 among those who attended geriatric clinics of All India Institute of Medical Sciences, New Delhi, it was found

that multiple chronic illnesses, frequent acute illnesses and deficits of vision and hearing are the major and functional health problem of the health seeking population in India. In all societies and particularly in India senior citizens considered their family as the major support system mainly because of the tradition of patriarchal or matriarchal culture. They preferred to approach the family in case of any problems and only in absence of the family did they seek for institutional care [Bhamini Metha et al., 2003]98.

In India, the elderly are playing effective roles in the joint family system which provides them security and emotional support. In a study, it is found that nearly half of the elderly depend financially on their families. In addition 86.16 percent are being supported by the government through pension scheme which raised their self-esteem and self-reliance to some extent [Sunder Lal et al., 1999]99. The youth provided personal care to the elderly in all the possible ways. The men gave medicine to them regularly and accompanied them when they need to go out, whereas the girls and women washed the clothes of the elderly. They also served

98 Bhamini Mehta & Indira Mallya (2003), Self-appraisal of elderly in slums of Vadodra City, HelpAge India, Research and Development Journal

99 Sunder Lal Dr. and (Brig) S.L. Chadha and Dr. P.C Bhatta (1999) 25:5
them food, gave them medicines and cleaned their room [Amirtha gowri, 2003].

The older people are the custodians of our rich cultural heritage. They adhere to universal values and their treasure of practical knowledge and experience guides them to wisdom. They are conserving firm in ideas, slow to adopt new ideas, meticulous in observing rituals and following traditions. They are dogmatic in their approach. There is always a gap between the young and the old. To bridge the gap, the parents should socialize their children to promote psychological bonds with the old, particularly the traits of love, compassion and obedience towards the elderly [Bajpai, 1998]. The trend in the size and growth rate of the elderly population in the country will become a major social challenge in the future when vast resources will need to be directed towards the supported care and treatment of the old. To solve the emerging problems of the elderly effectively, a holistic approach has to be followed considering the social, economic and cultural changes that have taken place in Indian society [Sivaraju, 2002].

100 Amirtha Gowri R et al (2003), A comparative study on the attitudes of adolescents and adults towards the care of the elderly, Research highlights journal of Avinashalingam institute for home science and higher education for women, 13:1


102 Siva Raju S. (2002), Health of the elderly in India, Issues and Implications, Research and Development Journal, Help age India, 8:1
Traditionally Indian society has looked after its elderly citizens through the family and community support systems. The social and economic security of elder people, rested in the hands of the younger generation of individual families, which considered such a duty to be sacrosanct and a part of their socio-cultural heritage. However as in other parts of the world urbanization and large scale migration for economic reasons are changing societies and family systems. The average family size is shrinking due to lower birthrates and socio-economic reasons resulting in fewer caregivers. The family activities which required more people providing engagement for healthy elders to some extent are being gradually and very definitely replaced by technology. Women are increasingly stepping outside the home for employment and higher education, consequently the marginalization of the elder persons within and outside the families is on the rise. Although family ties in India are still live with their family members, the position of an increasing number of older persons is becoming vulnerable. In the present scenario they cannot take it for granted that their children will be able to look after them when they need care in their old age, keeping in view the longer life span which implies an extended period of dependency. The changing roles and expectations of women have also had the impact of reducing the availability of caregivers to discharge the traditional family responsibility of caring for the older members [Help Age India, 2002].
In the traditional Indian society, the aged occupied position of power and prestige. The traditional social and cultural values did not permit the grown up children to leave their parents financially dependent on others and physically insecure. Moreover the prevailing economic, political and social value systems which were based on the cultural preservation they had inherited, enabled the aged people to enjoy leadership roles in the joint family, caste groups and the village community, this traditional system provide social, economic and emotional security to the aged. But industrialization, urbanization and modernization have changed the values of traditional Indian society. This change in social structure and value system does not seem to be in harmony with the changes in the demographic structure of society. Due to the advances in medical science, improved health standards and better living conditions, there has been a steep rise in the population of elderly in India.
THEORITICAL APPROACHES TO GERIATRIC HEALTH

The process of ageing is complex and multi dimensional, involving significant loss and decline in some physiological functions and minimal change in others. Scientists have long attempted to find the causes for this process. Some theories posit that ageing is a process that is programmed into the genetic structure of each species. Yet genetic heritability within a species accounts for only 35% of the variance in life span. More likely it is the rate of damage to DNA and its ability to repair itself that predicts longevity [Rattan and Clark 2005]. Other theories state that ageing represents an accumulation of stimuli from the environments that produce stress on the organism. Any theory of ageing must be based on the scientific method, using systematic tests of hypotheses and empirical observations. It is generally agreed that in order to be viable, biological theories on ageing must meet four criteria viz; the process must be universal, i.e. all members of a species must experience a phenomenon, the process must be deleterious or result in physiological decline, the process must be progressive, that is the losses must be gradual over time and finally the losses must be intrinsic that is they cannot be corrected by the organism.

The Wear and Tear Theory of Wilson [1974] explains that like a machine; the organism simply wears out over time. In this model ageing is a pre- programmed process that is; each species has a biological clock that determines its maximum
life span and the rate at which each organ system will deteriorate. And these systems are most likely to experience significant decline in their ability to function effectively with age. In another context, ageing theory propounded by Hayflick and Moorehead [1961], called cellular ageing theory, revealed that the cells grown in culture undergo a kind of definite replications of behavioural systems. Cells from older subjects replicate even fewer times, as those cells derived from individuals with Progeria and Werner syndrome—both rare genetic anomalies in which ageing is accelerated and death may occur by age 15-20 in the former and by 40-50 in the latter condition. It appears that cells are programmed to follow a biological clock and stop replicating after a given number of times. The number of divisions a normal cell undergoes depends on the specific cell type. Telomeres at the end of chromosomes shorten with each cell division and keep track of the number of divisions it undergoes. Once the telomere shortens to a critical length, the cells stop replicating. In addition, each cell has a given level of DNA that is eventually depleted. This in turn reduces the production of RNA which is essential for producing enzymes necessary for cellular functioning hence the loss of DNA and subsequent reduction of RNA eventually result in cell death [Chang and Harley 1995, Dagarag, Evazyan, Rao and Effros 2004, Effros 2009, Hayflick 2000].

Still further the Immunological theory put forward by Effros [2001], Walford [1969] indicates that, this ageing theory makes use of the findings of cellular
ageing theory in its observations that replicative senescence occurs with ageing, defined as the declined ability of T-cells in ageing organisms to replicate this theory posits that ageing is a function of the body’s immune system becoming defective over time. The immune system which serves as an important protective system early in life becomes less efficient and impaired in making the body resistant to pathogens that attack and interfere with normal functioning. According to this theory, failure of the immune system reduces the organism’s ability to fight infections in the later year. This process may be responsible for cardiovascular disease, alzheimer’s disease, cancer, diabetes and inflammatory diseases that are associated with ageing and in many cases may have an immunological etiology.

It has been observed that Oxidative Stress Model of Ageing or the Free Radical Theory of Hamilton & others [2000] states that the progressive and irreversible accumulation of oxidative damage to cells explains the age related loss of physiological function. Oxidative stress occurs when an organism cannot easily detoxify or repair the damage caused by free radical or other reactive oxygens. This reactive oxygens are formed as a normal by product of oxygen metabolism. Although people are exposed to oxidative damage from birth, the process accelerates in older adults and leaves them vulnerable to degenerative age related diseases. This may occur because of an age related decline in the organisms antioxidant defenses and repair systems. Anti-oxidants serve the function of fighting
off attacks on DNA by free radicals [Finch 1990, Thavanati, Kanala, De Dios and Garza 2008].

Further the Mitochondrial DNA mutation Theory of ageing offers another perspective on the biological process of ageing. There is evidence that mutated forms mitochondrial DNA accumulate in the body with ageing. However it is unclear if this is a cause or by-product of age related deterioration and death. The idea of mitochondrial changes playing a role in ageing was first proposed by Harman [1972], who suggested that ageing is caused by oxygen species that are normal by product of cellular function but attack the mitochondria and there by damage the cell. Subsequent researchers have hypothesized that ageing may be due to errors made during the cells attempt to repair or replicate damaged DNA in the mitochondria [Khrapko and Vijg, 2008]. Evidence for the impact of mutated mitochondrial DNA on ageing are the accumulations observed in muscle tissue, which under goes significant loss of mass by age 80, and in parts of the brain where lesions associated with Parkinson’s disease are located. But researchers have not yet demonstrated that these DNA deficits are in sufficient to cause muscle loss and Parkinson’s disease. Nevertheless one cannot assume definite casual links between mitochondrial DNA mutations and the ageing process [Campsi and Vijg 2009, Kujoth et al., 2005, Trifunovic et al., 2004]
One of the earliest attempts to explain how Individuals adjust to ageing involved in an application of Role theory of Kottrell [1942]. In fact this theory has endured partly because of its applicability and its self evident nature. Individuals play a variety of social roles across life’s course such as student, mother, daughter, wife, business woman, grandmother. Such roles identify and describe a person as a social being and are the basis of self concept and identity. They are typically organized sequentially, so that each role is associated with a certain age or stage of life. Age norms serves to open up or close off the roles that people of a given chorological age can play.

Every society conveys age norms through socialization, a lifelong process by which individuals learn to perform new roles, adjust to changing roles, relinquish old ones, learn a “social clock” of what age is appropriate, and there by become integrated into the society. Older adults become socialized to new roles, such as grand parenting. In addition, they must learn to deal with role losses such as the loss of the spouse or partner, role by widowhood or divorce or the worker role with retirement. These losses can lead to an erosion of identity and self esteem [Rosow 1985]. Older people may also experience role discontinuity, whereby what is learnt at one age maybe useless or conflict with role expectations at a later age [Ekerdt and Deviney [1993].
In another context the Activity theory attempts to answer how individuals adjust to age related change such as retirement, chronic illness and role loss. Successful ageing is viewed as a success of middle age, in which older people seek to maintain roles, relationships, and status in later life. Based on Robert Havighurst’s [1963-68], analyses of the Kansas City studies of adult life, it was believed that the well adjusted older person takes on age appropriate replacements for past roles through productive roles in voluntary, faith based, and leisure associations. It was assumed that the more active the older person the greater his or her life satisfaction positive self concept and adjustment. Accordingly, age based policies and programs and conceptualized as ways to develop new roles and activities, often consists with middle age behavior and to encourage social integration to a large extent, activity theory is consistent with the value placed by our society on paid work, individual responsibility and productivity [Powell 2000-01]. Activity theory defines ageing as a social problem that can be addressed by trying to retain status roles and activities similar to those of earlier life stages.

The development of disengagement theory represented a critical juncture as the first public statement where in social ageing theory is treated as a form of objective scientific inquiry using surveys and questionnaire methods separate from policy and practice applications [Lynott and Lynott 1996]. In fact disengagement theory was the first comprehensive, explicit, and multi disciplinary theory advanced in
social gerontology [Achenbaum and Bengtson 1994]. Cumming and Henry in their classic work, “Growing old” [1961] argued that ageing cannot be understood separate from the characteristics of the social system in which it is experienced. All societies need orderly ways to transfer power from older to younger generations, and to prepare for the disruption entailed by the death of its oldest members. Therefore the social system deal with the problem of ageing, or “slowing down” by institutionalizing mechanisms of disengagements or separation from society. Disengagement is thus viewed as inevitable and adaptive allowing older people to maintain a sense of self worthwhile adjusting through withdrawal to the loss of prior roles such as occupational or parenting roles, and ultimately preparing for death [Powell 2000-01]. In contrast to activity theory it views old age as a separate period of life and not as an extension of middle age.

Disengagement theory is now widely discounted by most gerontologists. While attempting to explain both system and individual level change with one grand theory, it has generally not been supported by later empirical research [Achembaum and Bengtson, 1994]. Elders especially in certain cultures may move into new roles of prestige and power. Even in cultures in which disengagement is normative not all elders disengage as evidenced by the growing numbers of older people who remain employed, healthy and politically and socially active [Bengtson et al., 2009]. Disengagement theory fails to account for variability in individual
preferences, personality, culture and environmental opportunities within the ageing population [Estes and associates 2001]. Likewise it cannot be assumed that older people’s withdrawal from useful roles is necessarily good for society.

Further the Gerotranscendence theory, to some extent parallels disengagement theory in its aim of developing a Meta theory in its universal theory of ageing. This theory views greater focus on the inner self as a positive characteristic of old age, however gerotranscendence represents a shift in the elders perspective from a materialistic rational view of the world to a more cosmic and transcendent one in which older adults explore their inner selves and are less interested in material goods, become more selective in their meaningful relationships and are less self centered, instead searching for ego integrity [Eriksons 2000-2005]. Like disengagement theory gerotranscendence values contemplation and solitude in old age. The ageing experience may cause elders to feel increased affinity to prior generations, smaller time gaps between historical periods and a lesser divide between life and death. Gerotranscendence characterizes by wisdom, self acceptance, purpose, and a shift from judgments implicit in “successful ageing”, is viewed as the highest level of human development but it is not a universal or culture free process.

While challenging with both activity and disengagement theories, Continuity theory in this area maintains that the focus on social psychological theories of
adaptation that were developed from the Kansas City studies. According to continuity theory, individuals tend to maintain a consistent pattern of behaviour as they age substituting a similar type of roles for lost ones and keeping typical ways of adapting to the environment. In other words individuals do not change dramatically as they age, and their personalities remain similar throughout their adult lives, unless impacted by illness or other major life events. Life satisfaction is determined by the consistency between current activities or life styles of one’s life time experiences [Neugarten, Havighurst and Tobin 1968]. This perspective essentially states that, with age, we become more of what we already were when younger. Central personality characteristics become more pronounced and core values silent with age. Continuity theory has some phase validity because it seems reasonable. However, it is difficult to test empirically, because an individual’s reaction to ageing is explained through the inter relationships between biological and psychological changes and the continuation of lifelong patterns. Another limitation is that by focusing on the individual it overlooks the role of external social, economic, and political factors that influence the ageing process. Thus it could realize a laissez faire, or ‘live and let live’, approach to addressing problems facing older people [Bengtson et al., 2009].

A number of alternative theoretical viewpoints have been emerged since the 1960’s each attempting “the facts” of ageing between better than another or take account
of its subjective meaning [Bengtson et.al 2009, Powell 2006]. Perspectives that emphasized a macro level of structural analysis include a symbolic interactionism, age stratification, social exchange and political economy.

In the social behavior Symbolic interaction theories focus on the person-environment transaction process as the dynamic interplay between older individuals and their social world. Attempting to bridge the gap between the activity and disengagement points of view, the symbolic interactive perspective posits that interactions between individuals and their environments significantly affect people’s experience of the ageing process and themselves. People reflect on their lives and design ways of understanding their position in the social system [Bengtson et al., 2009, Gubriun 1973]. This viewpoint emphasis the importance of considering the meaning of activity of the individuals concerned since the extent to which an activity is valued varies with the environment symbolic interactionist both the self and society as able to create new alternatives. Therefore withdrawal from social networks is not inevitable with ageing.

In modern time as in many social dynamics stratification has also influenced ageing. The age stratification theory of Riley [1999], well supplemented the observations of social stratification. Age as a stratum has been illustrated in this aspect. Just as societies are stratified in terms of social class, gender, and race, every society divides people into categories or strata according to age ‘young’,
‘middle aged’ or ‘old’. Each stratification is defined in terms of differential age cohorts. This means that individual’s experiences with ageing, and therefore their roles, vary with their age strata. Structural changes in the system of age stratification influence how a person’s experiences affect life satisfaction [Lynott and Lynott 1996].

Age stratification theory first conceptualized by Matilda White Riley [Riley 1971, Riley, Johnson and Foner 1972, Riley, Fonner and Riley 1999], challenges the focus of activity and disengagement theories on individual adjustments. This theory acts as a structured time component in which cohorts pass through an age graded system of expectations and rewards [Riley et.al 1972]. It recognizes that the members of one stratum differ from each other in both their stage of life (young, middle aged, or old) and in the historical periods they have experienced. Both the life course and historical dimensions explains differences in how people behave, think, and in turn contribute to society. Because of their particular relationships to historical events people in their old age stratum today are very different from persons of the past or future, and they experience the ageing process differently. This also means that cohorts collectively influence age stratification as they age.

While Social Exchange Theory challenges activity and disengagement theories, drawing on economic cost- benefit models of social participation, Dowd [1980] attempts to answer why social interaction and activity often decrease with age. He
maintains that withdrawal and social isolation results from an unequal exchange process ‘investments and returns’, between older persons and other members of society. The balance of interactions - the costs and benefits- between older people and others determines personal satisfaction. Because of the shift in opportunity structures, roles, and skills that accompanies ageing; some elders have fewer resources with which to exert power in their relationships and their status declines accordingly [Lynott and Lynott 1996]. In the social exchange model adaptability is a dual process in ones environment as well as adjusting to it.

In another context Political Economy of Ageing mainly focuses on the macro analysis of structural characteristic of capitalism that determines how scarce social resources are allocated in old age and serves to marginalize older people. Political economy theorists reject biomedical, activity, and disengagement models of ageing. Instead the attention is on the social class as the primary determinant of older people’s position with the dominant groups trying to sustain their own interests by perpetuating class inequities [Estes 2001, Estes and Associates 2001, Kail, Guadagno and Keene 2009, Minkler and Estess 1998]. Thus socio economic and political constraints, not individual factors, shape the experience of ageing and are patterned not only by age and class but also by gender, sexual oriental, functional orientation, race. These structural factors often institutionalized and reinforced by public policy, limit the opportunities and choices of later life
resulting in accumulative disadvantages in old age, which are further exacerbated by retirement. In other words the cumulative effects of disadvantage are linked to mechanisms of social stratification [Ferraro and Kelly-Moore 2003, Kail et al., 2009].

The life-course perspective is not necessarily a theory but a framework pointing to a set of issues that require explanation [George 1996-2007]. It attempts to bridge sociological and psychological constructs about processes at both the macro (population) and the micro (individual) levels of analysis. The life course perspective proposes that ageing and its meaning are shaped by structural influences cohort history, culture, and location as well as individual developmental factors such as the sequence of life events, inter relatedness with others and human agency. The cohort is the fundamental unit of social organization that creates the context of human development and for structured access to opportunity. The four principals of life course theory includes historical time and place (example social context and cohort effects) timing in lives, linked lives (inter-generational transmission and shared experiences) and human agency to make choices [Elder 1994, 1998].

Over the years particularly during the end of 20th century the attitude and academic programmes towards geriatric studies have attained new dimensions, of course, this varied in different cultures and linguistic groups. Social phenomenology,
Social constructivism, social constructionism, the second transformation in theoretical development is distinguished by social phenomenology is described as a qualitative leap in gerontological thought occurring since the early 1980’s [Bengtson et al., 2009, Lynott and Lynott 1996, Powell 2006].

Social phenomenology uses an interpretive approach to knowledge and focuses on understanding the human meanings of social life in the context of everyday life rather than explanation of facts. Taking issue with the presumed ‘facts of ageing’, phenomenological theorists question the nature of age, how it is described, and who’s interests are served by thinking of ageing in particular ways. Accordingly the emphasis is on understanding individual process of ageing that are influenced by social definitions and social structures [Bengtson et al., 1997, 2009, Longino and Powell 2009].

Social constructionism refers to the structural development to the phenomena relative to social contexts, while social constructivism refers to an individual’s making meaning of knowledge with a social context. We use social constructivism when referring to how ageing is defined as a problem more by culture and society than by biology, more by beliefs, customs, and traditions than by bodily changes while social constructivism refers to how individuals experience and make meaning of the ageing process.
Phenomenology has also influenced other contemporary social gerontology theories, especially critical and feminist theories. Critical theory, encompassing critical gerontology, deconstructs the biomedical model of ageing and examines how structural and institutional factors, especially social class, create disparities in the ageing experience. Moody [1998,2002] identifies four goal of critical gerontology viz; to theorize subjective and interpretive dimensions of ageing, to focus not on technical advancement but on ‘praxis’, defined as active involvement in practical change, whether making decisions about care or influencing public policy, to link academics and practitioners through praxis, to produce “emancipatory knowledge”, which means positive vision of how things might be different, or what a rationally defensible vision of a good old age might be.

In the context of Feminist theories which are guided by social constructivism, constructionism and critical gerontology, differ by making women’s issues central to the discourse [Bengtson et al., 2009]. The feminist perspective contends that the current theories of ageing are insufficient by their failure to include gender relations and women’s experiences as central to the ageing experience [Calasanti 2009, Cruikshank 2009, Estes 2001]. Feminist theories attempt to integrate micro and macro approaches to ageing through linkages between individuals and social structures, or between personal problems and public responses. In particular, they make explicit how women’s and men’s experiences are influenced by structural

Based on these theoretical and research observations, the following stages of the study has been developed.