UNREPORTED NEEDS OF ELDELRY AT HOME

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Dedicated to the loving memory of

Dr. Harichandran and Mrs Ambika Ramachandran

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The opinions expressed in the study are my own, and the responsibility for any errors that remains is entirely mine.

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I

INTRODUCTION

Population ageing indisputably has come to stay and will remain a topic of concern for a long time to come. Most of us wish to live as long as possible with out getting old. The legend on the fountain of youth has no wonder fascinated many. Different people face aging in different ways; some try to extend the appearance of middle age, some refuse to recognise facts, while others bring in premature aging by developing anxiety.

The advance in medical knowledge has lead to an increase in life expectancy and an increase in the number of old people in the society. Given this fact, modern science has not devised a plan to restore their vitality and independence. This is the age of gene manipulation and cloning;, the human race is running mad after super-nutrients and cosmetic surgery in the pursuit of fighting ageing and many a business minded people have amassed wealth and fame, distributing magic powders and potions. While mending the skin-deep disturbance of wrinkles and dryness, the real problems of social alienation, social mobility and increasing medical problems unfortunately go unnoticed by the policy makers and administrators. At worst, the danger that the current economic and political difficulties, which beset the health and social services, may bind us a far greater crisis; this is a vast and still growing burden, that disease and disability in our increasing population of elderly people has yet to be formally addressed.

Implications of an ageing population

The rapid increase in the number of old people in the population raises various social, economic and health issues. Many studies all over the world have shown that ill health is one of the most important factors that cause fear in the minds of old people. In India, where the elderly population depends heavily on the family for economic and emotional support, this fear is compounded by the change in family relationships and living arrangements. Along with the increasing number of young people moving abroad to pursue opportunities for employment and adventure, the emergence of nuclear families, single parent families, female headed households and dual earner families disrupted the traditional family norms and form the soil for a deteriorated care system of the aged. The community used to play a major role in the caring for aged by reinforcing the ability of the family to offer a caring environment. The community also laid down the moral sanctions to promote the care of aged, handicapped and the frail.

But the unplanned urbanisation, along with many changes has shattered the traditional community care system (Singh, 1997).

Age of the ageing

The World conference on Ageing in Vienna in 1984 first highlighted the significance and characteristic of the twentieth century - the population ageing. Along with the developed countries, developing countries are also facing the demographic transition in which there is a shift from high birth and high death rates to low birth and low death rates. In 1985, through out the world there were 427 million persons aged 60 and above. These figures are projected to be 1,171 million by the year 2025. If the expected rise in developed countries is 77 percent by the year 2025, this is 207 percent in the case of developing countries. With a population of 944.5 million, India is supporting 16 percent of the world's elderly population (Vijay Kumar S, 1985). Though India's age composition is typical of underdeveloped countries, the sheer size of the population brings India to the forefront of the countries with a high proportion of aged persons. By the year 2001, one in seven elderly persons above the age 60 would be from India (UN Report, 1991).

Many factors have contributed to this unprecedented increase in an ageing population, and this includes the following:

- The economic changes that resulted from the agricultural and industrial revolution have lead to the increase in nutrient intake, improvement in sanitation, water supply and better housing.
- The new generation and application of specific knowledge and tools for improving health by the use of immunisation and antibiotics which began with the discovery of penicillin for controlling communicable diseases.
- The improvement in dissemination of information through media like television and Internet.
- The improvement in health services and health awareness.

The effects of these improved living conditions are reflected in the reduction in mortality, especially the infant mortality rates and maternal mortality rates, and also in improved life expectancy at birth. The World Bank report of the year 1980 points to a new factor in longevity. The success of medical science, especially in controlling infectious disease has broken the traditional link between income/GNP and health/life

expectancy. It is no longer true that less wealthy countries will be relatively less healthy than the more developed economies. The life expectancy today in India is higher than it was in France in the 1920s, although the average French man of those days enjoyed infinitely higher standards of income, nutrition and education than the average Indian of today (Tout, 1989). In developed countries, along with a decline in mortality rates, the crude birth rate and death rates also declined. The increase in population that followed the mortality decline was only temporary in the developed countries as fertility decline soon followed bringing population back to low levels.

The improvement in life expectancy that began in Europe in the late 19th century, continued to improve virtually without interruption through out the 20th century. The low and middle-income countries have also followed a similar trend. In India the expectation of life at birth for males has shown an increase from 42 years in 1951-60 to 58 years in 1986-90, and it is projected to be 67 years by 2011-16. This shows an increase of about 9 years in a 25-year period. In the case of females, the increase during the same period has been 11 years. The expectation of life at the age 60 years during 1989-1993 was 15 years for males and 16 years for females (GOI, 1999).

Table 1.1

Life expectancy in selected countries (in years)

Country	Around 1910		1998	
	Males	Females	Males	Females
England	49	53	75	80
Japan	43	43	77	83
Sweden	57	59	76	81
USA	49	53	73	80
India	23	23	60	61

Sources: UN World Health Report 1999 and Regional Health Report 1998

Many of the industrial countries have passed through different phases of demographic cycles, and have reached the low stationary phase of low birth and low death rates, resulting in a stationary population. Some have even reached the declining phase, where birth rate is lower than death rate a statistic that lead to a declining population (Park, 1998). The World as such, has moved from an age distribution with numerous young and a few elderly to one with nearly equal numbers in most age groups (WHR, 1999).

India is now in the third phase of a demographic cycle where the death rate continues to decline, the birth rates tend to fall and the population continues to grow. From only 12 million persons above age 60 in 1901, the number crossed 20 million in 1951 and to 57 million in 1991. It is expected that the 100 million mark will be reached in 2013. Sixty-three percent (36 million) of the population in 1991 is in age group 60-69years while eleven percent (6million) is in age group 80 years and above. In 2016 it is projected that the percentage of both the age groups will be same, but the numbers are expected to be 69 million in case of elderly people above the age 60 and 11 million in case of elderly people above the age 80 years (GOI, 1999).

Of all the states in India, Kerala has the highest proportion of elderly persons above the age of 60. While the overall figure in India is 7.9 percent, in Kerala the proportion is 10.2 percent. The proportion of elderly women is 11.5 percent and elderly men 8.9 percent (Census of India, 2001). According to the 1991 census, there were 25.5 lakh elderly persons in the State and they form 8.8 percent of the total population. The estimated number of elderly in the year 2001 was 34.5 lakhs (10.9%) and, this is projected to be 25 percent by the year 2031. The peculiarity of aging population all over the world is the preponderance of women over men. But in India, the over all sex ratio and the sex ratio of the elderly population are in favour of males with 929 and 932 respectively. The same trend was observed in the 1971 and 1981 census. There are seven countries in the world with a sex ratio favourable to males i.e. above 1.05, all in Asian countries which are Sri Lanka, Mainland China, India, West Malaysia and Pakistan (Karkal, 1999).

In the context of Kerala's special health scenario, which is often considered at par with those of many industrialized countries, certain factors need special mention. The most important among them are the high degree of health promotion by the rulers even from the days of the Princely State of Travancore, the activities focused by Christian missionaries on health and education, especially female education, investment in health and education by all elected governments in Kerala helped set a foundation of a well organised primary health care system (Raman Kutty, 2000).

Over the years these factors have been instrumental in reducing the burden of communicable diseases, mortality rates, improving life expectancy and creating health awareness. Life expectancy at birth for males in Kerala is 71 years and that for females it is 73. Now, this trend points to the need of a radical shift from childcare service to

eldercare service (Nayar, 1999). Kerala also shares with the industrialised countries, the phenomenon of epidemiological transition characterised by decline in communicable diseases and increase in incidence of chronic and degenerating diseases. This epidemiological transition has also started to penetrate India. The pre-transitional disorders, which contributed to 56 percent of the Disability Adjusted Life Year (DALY[1]) loss in 1990, are projected to decline to25 percent by 2020. The DALY of non-communicable diseases, on the other hand is expected to rise from 29 percent to 57 percent during the same period (Reddy, 1998).

Health problems of the elderly

With ageing there is a reduction in physiological reserve capacity. But getting old also shows a wide range of variation. Though on an average there may be a moderate decline in organ function, this remains unchanged in some individuals whereas in others the decline in function is so severe that it leaves them seriously incapacitated. A complex relationship exists between physical health, mental health and socio-economic status. Psychosocial crises such as retirement, loss of income, widowhood and movement from a familiar environment all contribute to this complexity. Geriatric syndromes like impaired mobility, falls, impaired cognition, urinary incontinence are multi-factorial health conditions that renders a person vulnerable to situational changes (Tan, 2001).

Some of the features that distinguish the health problems of elderly from that of the other segments of population are the following:

- Death, disease and disabilities increase with age.
- Unlike younger people in whom disease and death are mainly due to acute conditions, in the case of elderly these are due to chronic conditions.
- Elderly individuals suffer from multiple pathologies.
- Atypical presentation of diseases where the signs and symptoms are not the same as they are for young adults. For example the occurrence of urinary tract infections with out the typical symptom of disuria (painful micturation), or a silent heart attack peculiar with the absence of pain.
- The elderly patients present themselves in the clinic with illness quite late, creating a situation where the physician will not be able to impart useful treatment for the benefit of the patient.

[1] DALY-Disability Adjusted Life Years is the measure of the healthy life lost due to ill health and death.

- Caretakers who do not have the time or patience to discuss with the doctor on treatment modalities and corrective measures.

Purpose of this study

This research study has its origin in the researcher's observation as a practising physician about the condition of elderly persons attending clinics. Most of the elderly were observed to be in an advanced stage of disease, and show signs of prolonged neglect and sub-nutrition. A careful history taking would reveal that many of the disabilities and ailments could have been prevented if there was timely medical and social intervention. For example, failure of regular check-up of blood pressure and blood sugar can lead to complications like a stroke, precipitation of mild infection such as urinary tract infections to life threatening renal failure, respiratory tract infection to pneumonia. Lack of proper medical examination can lead to missed diagnosis. For example, if a vascular disorder of lower limbs (legs) is not diagnosed in time, it can lead to the impairment of mobility or even a loss of limbs, which is almost a curse in old age. Many of such simple, but effective interventions do not seem to be forth coming for some reason. Society in general, and the dispensers of health care in particular do not seem to understand the needs of elderly people.

Problem statement

In the case of an increasingly large number of elderly populations, timely and proper medical care is not happening and the reasons are not very clear either. As the elderly people are an integral part of the society, the society has a responsibility to take timely and effective action to mitigate their suffering. In order to plan a proper social intervention, it is necessary to assess the health problems faced by the elderly and to identify the causes leading to the situation. This study is an attempt in this direction.

Specific objectives

- To identify the different types of physiological and behavioural problems among older people and to assess the severity and the extent of their prevalence in society.
- To assess the unreported medical, nursing and social needs of such people.
- To determine the extent to which their needs are met and the reasons for the gap.
- To identify the socio-economic variables associated with the disabilities.

The focus of this study is of people aged 65 years and above, residing in their own homes, or houses of close relatives.

Structure of the report

This report is organised into 8 chapters. In chapter 2 that follows, the problems of the elderly are discussed on the basis of relevant literature. Methodology and conceptual framework of the study are given in chapter 3. Findings from the survey on social life of the elderly are presented in chapter 4 and the results of clinical examination are presented in chapter 5. In chapter 6, some illustrative cases on the condition of elderly are given. This is followed by a discussion of the results in chapter 7. The concluding chapter 8 indicates the policy implications of the research findings.

II

GERONTOLOGY AND GERIATRICS: REVIEW OF LITERATURE

Increasing longevity is often viewed as a blessing, but it depends on whether the extra years gained are years of good health and activity. Many of the physiological parameters are reported to decline with age. But the knowledge on the process of aging cannot be said to be complete as most of the studies done on aging are cross sectional studies rather than longitudinal. These studies usually include individuals within the elderly cohort who have acquired diseases that might have affected different organs. In order to be attributable to aging per se, a phenomenon should be universal, intrinsic and progressive. "In nature, ageing is not even a common occurrence; for, in the wild, most creatures either die off or are killed at the first loss of physical or mental power" (Smith 1996).

This section is organised in three parts. First some of the existing perceptions on the phenomenon of aging are reviewed. Then the physiological and biological changes that happen in the body with aging are briefly given and then the literature on the influence of socio-economic factors in the health of the elderly people is briefed.

Perceptions on the phenomenon of ageing

The process of aging and associated problems has become a serious matter of various studies in the recent years. Coni and Webster (1998) in their lecture series on geriatrics say, "old age is unfortunately often a time of loss". The potential losses are varied but are often interrelated and the ones that accompany aging are the following:

- Health due to increasing pathology.
- Wealth due to termination of employment.
- Independence due to loss of controls over external and internal environment.
- Status due to retirement and loss of independence.

The above changes and losses may expose the elderly to the following consequences:

- Unhappiness, depression, grief, suicide.
- Increased risk of accidents.
- Poverty, dependence and abuse.
- Malnutrition and sub-nutrition.

On an average there may be moderate decline in organ function; while this remains unchanged in some individuals, in others the decline in function may leave them seriously incapacitated. The rate of deterioration in organ function is seen to be reduced by factors such as regular exercise or accelerated by bad habits like cigarette smoking or heavy alcohol consumption (Smith, 1996). What has been considered, as 'normal' aging may merely be 'usual' aging as argued by Rowe and Khan. Normal aging and pathological aging are different (Rowe and Khan, 1999). In normal aging diseases and debilities are not inevitable and a stage of "compressed morbidity" where debilities will be delayed till the fag end of life is possible. In pathological aging either the disease of the middle ages are carried over to the elder years which is more common or ailments like dementia, urinary incontinence and terminal conditions like cancer will set in.

An elderly person has to accustom to the changing scenario during a lifetime. The demise of the spouse, the separation of grown up children, social isolation, a decline in income and many of the life situations occur, to name a few. Psychological trauma thus incurred results in the isolation of the senior citizen to the confines of their home. Given the unknown variables of life circumstance, many elders will face a social impairment in mobility which can in due course manifest as appearance or aggravation of health problems such as arthritis and obesity. This in turn may again lead to withdrawal from the society. Among the participants of Women's Health and Aging Study, 46 percent of the elderly people were found to live fairly isolated and homebound and 15 percent never leave their houses in a typical week. About one third of the participants attend social functions once a month only (WHAS 1995).

Perhaps the most frightening aspect of aging is the deterioration of the brain, again considered inevitable according to some experts. Recent research however shows that the presumed loss of brain cells with age does not take place in normal aging. Vital new brain connections can continue to develop until the end of life. The plasticity of brain makes either decline or further growth possible but not programmed in age. On the basis of testing people ageing 68-80 years, it was found that though there is decline in maximum limits of functioning in the basic mechanism of intelligence, for most normal elderly people there is also great reserve capacity and potential for new learning and growth (Baltes and Klege, 1996). In a study done among the very old people (80 and above) involved in life long learning program in Bar-Ilan University it was found that all participating elders strove to continue the social contacts of their earlier lives and,

when necessary, established additional supportive associations to meet their needs. These people also rated their health considerably higher. In many ways, they lived as active adults and as intellectuals. They did not live as "old people" (Neikrug, 1999). Studies have shown that in the absence of ailments not only do cognitive functions remain stable but some mental skills especially vocabulary improves in response to ongoing challenge. So impairment of cognitive function should not merely be considered as wastebasket diagnosis of Benign Cerebral Senescence but should be properly investigated for underlying ailments. The Baltimore longitudinal study showed that crystallised intelligence and cardiac output also remains relatively stable (Finch, 1997).

The popular notion of elderly as consumers and dependants of working population needs to be rechecked. Firstly, empirical evidence shows that aged do not consume (relative to their income) more than the rest of the population. Secondly, the issue of dependency of the aged should be put in a broader context of the dependency of the unemployed and underemployed in the market economy. Thirdly from a long-term point of view, it is the working age and not just the working population that matter (Messkoub, 1999).

Today the western way of life is considered to be modern. As with food, housing style and education, retirement homes and old age homes are now considered to reflect the “wave of the future”. Among the states of India, Kerala has the highest number of retirement homes. The Western World has been witnessing many hard sell retirement communities. These systems came into being on the belief that it is the answer to loneliness and isolation for older people. Studies done in such places revealed that these retirement enclaves seemed to promote an “aged subculture but of a retreats type”. Those preferring to interact only with the aged turned out, on the average to be less active, lonelier, less confident and less satisfied with life and also less healthy than those who preferred interacting with all ages in the larger community (McClelland, 1982).

Coping with aging becomes difficult, as traditional community support systems are disintegrating into the emerging liberated scenario. In those societies in which extended family system is prevalent, the elderly are able to continue to perform useful and valued functions, and they enjoyed high status. This tends to be lower in societies, which favour nuclear families. Changes in family systems have also arrived in India where a

strong joint family system once existed. Traditionally, the community forms an important external force that reinforces the ability of the family to offer a caring environment for the aged. Thus the elderly in the traditional societies enjoyed unparalleled sense of honour, legitimate authority in the family or community. They also participated in decision-making responsibilities in the economic and political activities of the family and were treated as repositories of experience and wisdom (Singh, 1997).

Biology of ageing

From a physiological standpoint, aging can be described as the progressive constriction of the homeostatic[1] reserve of every organ system. This decline to a large extent is influenced by diet, environment, and personal habit as well as by genetic factors.

Changes in the body due to aging

Changes in skin like, decreasing function of sweat glands, diffuse hair loss etc, results in wrinkled dehydrated appearance. There is generalised loss of connective tissue[2]. In blood vessels this loss may lead to hypertension and in joints, stiffness. The ability of the kidney to excrete waste and maintain electrolyte balance also decline, which cause dehydration (Coni, 1998).

Though brain weights decrease by 20 percent by the age of 90, studies have proved that a decline in the number of neurons[3] do not contribute much to the decline in mental function. Performance in intelligence testing, learning ability, short-term memory and reaction time tends to decline but not significantly until about the age of 75. But, the changes in position sense receptors[4] and lower limb muscle weakness contribute to deterioration in balance, which, may be accentuated by physical inactivity (Coni 1998, Resnick, 1998).

On average, bone loss for women above age 80 is 30 percent and for men 10 percent. This loss is aggravated by, hormonal changes, alcohol and tobacco abuse, poor calcium intake, poor nutrition, drugs like steroids and certain disease conditions.

[1] Homeostasis is the maintenance of relatively stable internal physiological conditions (as body temperature or the pH of blood) in higher animals under fluctuating environmental conditions.
[2] Connective tissue is the supporting framework, which surrounds, connect and stabilize the body structures and the internal organs.
[3] Cells of brain concerned with transmission of information.
[4] Position sense receptors are located in the muscle joints and tendons and enable us to unconsciously monitor the position of our body and help the body to balance.

Gastrointestinal problems like indigestion and constipation common in old age is due to reduced surface area of intestine and falling acid secretion in stomach. There is reduction in lean body mass and body water and usually a relative increase in fat **(Mobbs web as on 25-05-04).**

There is gradual loss of active hemopoitic tissue as age advances. Malnutrition, sub-nutrition, vitamin deficiencies and hypothyroidism are the most common and treatable causes of anaemia in old age. The commonest non-specific symptoms of elderly people like tiredness, breathlessness and malaise are either caused or exacerbated by reduction in haemoglobin (anaemia). Changes in lens of the eye initially result in impaired near vision and later leads to cataract and loss of vision. Changes in cochlea[5] result in a high tone hearing loss (William, 1988, Finch, 1977).

General medicine verses geriatric medicine

Geriatric science or the science of care of the aged is still in the infantile stage in India and the debate on whether geriatrics as a speciality should be entertained is going on in the medical field. In this context how much the medical profession in general and physicians in particular are aware, about the care of aged is a question of speculation.

In general medicine there is much truth in Horder's Dictum: " The most important thing is diagnosis, the next most important thing is diagnosis.... the third important thing is diagnosis.....once the disease is diagnosed treatment follows automatically". In geriatrics this is not true. Some times prognosis is more important than diagnosis and some times treatment has to be started before diagnosis.

It is important for the geriatricians to follow the advice of Hippocrates[6] and to cultivate prognosis, "he will manage the case best who has foreseen what is to happen from the present state of affairs". When there are multiple problems, those, which respond to treatment best, should be managed first, acute illness should be given precedence and in case of chronic disease those, which prevent or limit mobility should be managed first than those symptoms which merely cause inconvenience. Presence of multiple pathologies or co-morbidity increases the risk of functional disability.

Health problems of the aged can be classified in two dfferent categories: The first is those incident to ageing process and the second, health problems associated with long

[5] Cochlea are hearing sense organs located inside the ear.
[6] The Greek physician who lived in 5th century BC. He is considered as the father of modern medicine.

term illness. Senile cataract, glaucoma, nerve deafness[7], bone changes affecting mobility, emphysema[8], failure of special senses[9] can be considered as those incident to aging process. Then there are some long-term health problems usually associated with aging. And these are:

1. Degenerative diseases[10] of heart and blood vessels such as atherosclerosis results in decrease in blood supply to various parts of the body and the incidence increases with age. Of the factors such as diet, heredity, obesity, nervous and emotional strain implicated, all factors are modifiable by the individual with the exception of heredity. During the last 30 years, the mortality rate from atherosclerosis has markedly and progressively decreased in the USA and in several other industrialized countries. The decreasing mortality rate is primarily due to the widespread use of preventive strategies, resulting in decreased prevalence of such risk factors as untreated hypertension, abnormal lipid levels, and cigarette smoking. *(Vokonas*) Studies have shown that a cardiovascular risk modification, especially a secondary prevention[11] using medical treatment may be more cost effective in elderly than in the younger population (Mittelmark et al. 1993).

Hypertension or increase in blood pressure predisposes elderly persons to heart failure, stroke, renal failure, coronary artery disease (disease of blood vessels supplying heart), and peripheral vascular disease (diseases of the blood vessels supplying limbs). Steroid preparation used to relieve respiratory difficulty, and Non-Steroid Anti-Inflammatory Drugs (NSAID), which are the commonly used pain killers/ analgesics, can elevate blood pressure. The use of NSAID promotes fluid retention in the body with consequent difficulty in breathing and increasing burden to the heart (Kane, 1999). Other conditions that can contribute to hypertension in the elderly are hyperthyroidism and malnutrition (*Appligate)*

Orthostatic or postural hypotension which is a decrease in blood pressure that occurs when one gets up from lying down position is documented to occur in 15 to 20 percent

[7] Senile cataract - Cataract of lens of eye occurring after age 50; Glaucoma- Disease of the eye characterised by an increase in pressure in side eye leading to progressive loss of vision,; Nerve deafness- Deafness due to a lesion of the nerve supplying the hearing organ deafness.
[8] Pathologic accumulation of air in lung tissue.
[9] Special sense organs are concerned with sight, hearing taste smell.
[10] Degenerative diseases leads to change of tissue to a lower or less functionally active form.
[11] Secondary prevention- Action that halts the progress of a disease at its incipient stage and prevents complications.

of elderly people. At times this decrease in blood pressure may be sufficient to compromise blood flow to brain and cause dizziness, syncope or fall. Its prevalence increases with age and is higher among patients with cardiovascular disease. Important causes are dehydration, use of anti-hypertensive drugs and prolonged bed rest. This is associated with symptoms like a fixed heart rate, urinary incontinence, constipation, and inability to sweat, heat intolerance, impotence, and fatigability *(Lipsitz).*

2. Mental Disorders. Dementia[12] and depression are the most common mental disorders seen in elderly. Depression is characterised by feelings of sadness and despair ranging in severity from mild to life threatening. It was found that the prevalence of clinically significant depressive symptoms ranges from 8 to 15 percent among community-dwelling elderly persons. Medical disorders, alcohol, some drugs, such as anti-hypertensives, cocaine, or other illicit drugs can cause depression. Social risk factors (such as loss of a spouse or partner, decreased social support, declining income) appear to cause depression more often in men than in women *(Blazer*). Because of differences in treatment, it is important to separate depression from other disruptions in behaviour (Lundquist RS et al., 1997). Depression and stress has been found to be positively associated with a number of health related events. A strong and graded association was found between the severity of depressive symptoms, risk of functional decline and death in patients with heart failure (Vaccarino, 2001).

3. Genitourinary[13] The most common genitourinary problem in elderly men is prostate enlargement resulting in narrow stream of flow of urine and difficulty in passing urine. Others common problems like urinary incontinence (uncontrolled passage of urine) nocturia (increased frequency of micturation during night) most commonly may be due to diabetes mellitus, infections of genitalia and urinary tract infections in women and prostate enlargement in men. Post menopausal bleeding however small should immediately alert the elderly women and the doctor alike since this is the most common symptom of cancers of cervix the lower part of uterus (Ahronhein, (website)).

4. Endocrine disorders[14]: Commonest disorders are those pertaining to thyroid gland and diabetes mellitus. Hypothyroidism is characterized by decline in level of thyroid hormone. The prevalence of overt hypothyroidism in elderly people above age 65 is 2

[12] Organic loss of intellectual function.
[13] Pertaining to genitalia and urinary apparatus.
[14] Disorder of system concerned with production of hormones.

to 5 percent. Another 5 to 10 percent of the elderly population may be suffering from sub-clinical hypothyroidism. The prevalence rises with age, is much higher in women than in men at all ages. Hypothyroidism in older persons is a great masquerade as they have significantly fewer symptoms of hypothyroidism than the general population and complaints are often subtle and vague. Elderly patients with hypothyroidism usually present with non-specific geriatric syndromes such as confusion, anorexia, weight loss, falling, incontinence, and decreased mobility. Suspicion is the key in diagnosis. Proper and timely treatment can completely correct these condition (*Solomon*).

Hyperthyroidism characterised by increased hormone production is prevalent in 0.2 to 2 percent of older population. The classic triad symptoms in older patients are tachycardia[15], weight loss, and fatigue. If treated, the prognosis for hyperthyroidism is excellent (*Solomon*).

Other problems are constipation and faecal impaction urinary retention fluid and electrolyte disorders. Faecal impaction and constipation are seen more in institutionalised individuals. The common causes are immobility, decreased intake of fluids and fibre in diet, impaired anorectal sensation, neurological disease, bowel lesion and adverse effect of some medicines such as some anti hypertensives antidepressants, anti allergens and some analgesics. Urinary retention in men is usually due to prostatic hypertrophy or enlargement. Sensation of thirst is diminished even among healthy elderly people. Dehydration might go unnoticed resulting in electrolyte imbalance. Excessive heat, diarrhoea, and febrile illness also contribute to this imbalance.

Giants of geriatric medicine

Urinary incontinence[16], acute confusion[17], immobility and falls are often sited as the giants of geriatric medicine. These are either symptoms or complications of a variety of disorders. Some of them are already mentioned.

Urinary incontinence: Urinary incontinence or inability to control voiding of urine is a symptom rather than a disease. It is often the proximate cause of social isolation, depression, and dependency. Local causes include pressure on the bladder due to faecal

[15] Increased heart rate.
[16] Passage of urine with out the voluntary control of the individual.
[17] Acute confusion is the stage where a person may be unable to maintain attention and whose thinking may be disorganized. Memory impairment, reduced level of consciousness, hallucinations, sleep disturbances may be present.

impaction, pelvic floor weakness in women or disordered micturation associated with prostate obstruction[18] in man. Urinary incontinence may also be caused by an acute or chronic urinary tract infection with a subsequent inflammation and irritation of urinary tract. Confusion and immobility can often cause incontinence. Disorders of nervous system such as stroke[19], Alzheimer's disease[20] or Parkinson's disease[21], can also result in loss of control over micturation. Urinary incontinence is said to affect 10-30 percent of community residing elderly people and 60-70 percent of those residing in nursing homes. Bladder training and certain drugs can be sought as a remedy. Frequent nocturia[22] is associated with falls, probably because the elderly person has difficulty getting up and walking to the bathroom quickly at night.

Acute confusion: Acute confusion, usually the result of an organic disease is more common in old age. Disorientation, thought disorganisation, memory disturbance and inability to concentrate, delusions and hallucinations[23], irritability, disturbed sleep, increased activity and anxiety are the manifestation of this very disturbing condition. The common causes are a) infections; respiratory and urinary infection, b) metabolic disorders: fluid and electrolyte imbalance[24], hypoglycaemia[25], c) hypothermia[26], d) heart failure, e) toxicity due to alcohol and inappropriate drug therapy including poly-pharmacy[27]. Other causes are stroke, infection of brain, head injury and drugs acting on brain, for example, an abrupt withdrawal of tranquillisers. Careful history taking and investigation is indispensable in these situations. (Mac Lennan, 1999).

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[18] Obstruction of the urinary tract due to enlargement of prostate.

[19] It is the sudden diminution or loss of consciousness, sensation, and voluntary motion caused by rupture or obstruction (as by a clot) of a blood vessel of the brain. Also termed *brain attack/cerebral accident/, cerebro-vascular accident.*

[20] Is a progressive disease of the brain that is characterized by impairment of memory and a disturbance in at least one other thinking function (for example, language or perception of reality). It is not a normal part of aging and is not something that inevitably happens in later life.

[21] Is a degenerative disease of a part of the brain called the substantia nigra which normally helps control motion slowly stops working. Parkinson's disease generally affects people who are elderly and has several classic symptoms including tremor, stiffness of the limbs, mask-like face, gait disturbance (difficulty walking), and dementia.

[22] Is increased frequency of micturation during night

[23] Are false beliefs or thoughts.

[24] Can occur from dehydration, severe diarrhea and or vomiting after surgeries etc. Can result in abnormal functioning of heart and other organs.

[25] Hypoglycemia is a condition where body's blood sugar, or glucose, is abnormally low.

[26] An abnormal and dangerous condition in which the temperature of the body is below 95F (35 C). Usually caused by extended exposure to cold. Old age, chronic ill health, heart/ circulation problems malnourition are high risk factors. Apathy, lethargy, confusion, slowing of breathing and slurred speech uncontrollable shivering are the common symptoms.

[27] Is a specific type of iatrogenic illness(Doctor induced) in which too many medications are prescribed without proper reference to drug interactions like conflicting effects or same effects.

Impaired mobility among elderly

Impaired mobility in elderly person is almost always a multi-factorial problem. Coming down on a single diagnosis may not bear fruit. The proximate causes of impaired mobility may be diseases of the loco-motor system[28], like osteoarthritis[29], rheumatoid arthritis or neurological disorders like Parkinson's disease. Pain, whether from bones (osteoporosis[30]), or from joints (e.g. osteo-arthritis, rheumatoid arthritis), intermittent claudication (pain over the limbs while walking) due to progressive decline in blood supply or foot problems (e.g. corns) may impair mobility (Resnick 1998). Osteoporosis is predominantly a disorder of elderly females. Pain is the most common symptom and the deformity-kyphosis[31] the main consequence. The main complication is increased incidence of fractures. Overall one-third of women in the Women's Health and Aging Study reported one or more fractures, six percent of which was hip fracture. Reduced intake of calcium and vitamin D, little exposure to sunlight, reduced exercise, prolonged immobility and steroid intake are some of the reasons, which are modifiable. (Butler 1999).

Falls: Falls and immobility have an interdependent relationship. They may be a symptom of a serious underlying problem. Environmental factors like accommodation with poor light, high steps, flexes, unsecured rugs, unfamiliar environment like new accommodation all can contribute to a fall in old age. Studies have found out that in the case of elderly most of the accidents happen at home. Medical factors that contribute to falls range from impairment in sensory input like visual impairment (cataract and glaucoma[32]), impaired balance due to osteoarthritis, residual effects of stroke, and Parkinson's disease and the use of certain anti hypertensive drugs to name a few. Metabolic disorders (e.g. thyroid dysfunction, impairment in glucose metabolism, and electrolyte disorders); anaemia and dehydration; and cardiopulmonary disorders (myocardial infarction, arrhythmias, heart failure, pneumonia, and emphysema) may also contribute to increased risk of falls, as may acute illnesses. Vertigo and fear of falling down often become major causes of impaired mobility. In a community based study it was found that over 50 percent of falls among elderly persons result in at least

[28] System of the body affecting movement of the body e.g. bones, joints, muscles.
[29] A variety of disorders marked by inflammation and degeneration joint tissues.
[30] Abnormal loss of bone mass.
[31] Hump in the spine caused by osteoporosis.
[32] Is the condition in which pressure inside the eye is increased resulting in progressive loss of vision.

some minor injury. Up to 2 percent of falls are found to result in the fracture of hip; other fractures (in the arm and pelvis) can occur in up to 5 percent of falls. Serious injuries (head and internal injuries, laceration) can occur in up to 10 percent of falls (Resnick, 1998, Close, 1999). Seventy-five percent of deaths caused by falls occur in the 12.5 percent of the population above 65 (Alexander, (website)).

Health condition of aging women

Older women's health may reflect their life long experience of deprivation and neglect. Consequently the prevalence and incidence of disease and disabilities are greater among women. The diseases of elder years like osteoporosis, Alzheimers arthritis and stroke are superimposed on already compromised health of a woman (Hug 1999). Osteo-arthritis is the commonest degenerative joint disorder, though affects both men and women, is more generalised and more severe in women and is symptomatic three times more among them than among men. (Nuki G, 1995) In addition to arthritis and Alzheimer's disease, there is significant gender difference in development of Cardio Vascular Disorders (CVD) like hypertension and stroke. Stroke is found to be the leading cause of death among elderly women. Once diagnosed with CVD older women are more likely to develop angina than Myocardial Infarction (Catherine, 1995). Dementia is also found more in women. Some study has shown an inverse relation between dementia and low Blood Pressure. Low BP can be a complication of dementia or it is also possible that low BP predispose some people to developing dementia. So it is very important to suspect these disorders in elderly women and there should be different assessment scales for men and women.

Following concepts underline geriatric medical care:

1. Onset of a new disease in the elderly generally affects an organ system made vulnerable by prior physiologic and pathologic changes.

2. Because elderly are more frequently hospitalised and generally suffer from multiple disorders, they are more susceptible to iatrogenic illness[33]. In a study of 815 consecutive admissions to a large university 36 percent developed iatrogenic illness, nine percent was life threatening. Adverse reactions to drugs are found to be the most common cause (Thomas, 1999). Persons with four medical conditions (cerebro -

[33] *Iatros* means *physician* in Greek, and *-genic*, meaning *induced by.* It refers to any adverse reaction caused by anyone thought or claiming to be a health specialist, in any setting. E.g. are adverse effect of drugs and infection acquired from hospital.

vascular diseases, coronary artery disease hypertension and arthritis) were four times more likely to be functionally limited as compared to persons with no chronic conditions (Ferrucci, et al., (website)).

3. Because the older persons are more likely to suffer adverse consequences of drugs, prevention may be equally or even more effective. For instance, although efforts to increase bone density may be futile in older persons, fractures may still be prevented by intervention that improves balance, strengthens legs, treat contributing medical conditions, restore nutritional deficits and reduce environmental hazards. A population based study of hospitalised patients in Utah and Colorado found that elderly patients had a higher incidence of preventable adverse events especially those from drugs, events related to medical procedures and falls. They also tended to experience more permanent disability and death from these events. Thirteen hospitals in Utah and fifteen in Colorado participated in the study. While 2.8 percent of non-elderly patients suffered from adverse events, the proportion in elderly is 5.29 percent. Incidence of preventable adverse events in non-elderly patients was 1.58 percent and that in elderly was 2.95 percent (Thomas, website).

4. Since many homeostatic mechanisms may be compromised concurrently resulting in multiple abnormalities, small improvements in each may yield dramatic overall benefits.

5. Many findings, which are abnormal in young persons, may be relatively common in older people. However, they may not be responsible for a particular symptom, but only be incidental findings that result in missed diagnosis and under treatment.

6. Atypical presentation and late consultation makes diagnosis and treatment complex. Regular and timely check of some of the simple measurements like blood pressure and blood sugar can sometimes even save life. The risk of development of silent heart attack and silent chronic kidney failure is much higher in an elderly person who has constantly elevated blood pressure and diabetes. Regular check up and correction gives the person the possibility to lead a healthy life. A lower standing Blood Pressure was found to be a predictor of fall in elderly persons in a community based prospective study of 266 community dwelling individuals aged 65 and above in coop city (Bronx et al, 2001).

7. Non-detection and under diagnosis by the medical practitioner. Many reasons can be attributed for this. The inability to give deserving care due to over crowding of the OP, non availability of medicines especially in a Government health care centre and simply

neglecting elderly person. A study done among 4200 non-institutionalised elderly people aged 65 and above found that 39 percent had some form of hypertension. For about 25 percent of those detected, hypertension was either untreated or poorly controlled (Hale et al, 1981). Delivery bias among modern medical practitioners proved very harmful to the elderly patients. "At this age what can he expect?" is a typical physician comment. Failure to encourage tests such as mammography[34] in women aged above 65, failure to investigate cholesterol level in blood, failure to investigate colon and rectum for cancer despite, the statistics showing that 80 percent of all fatal heart attacks and 60 percent of all cancers strike elderly above age 65. Paradoxically some studies have also shown over treatment in some areas of health care, especially certain surgical procedures like coronary angiography[35], carotid end-arterectomy[36], upper gastrointestinal endoscopy[37] which are costly investigations (Smith, 1996). Adding to this is the inappropriate drug prescriptions. Urgent and aggressive research aimed at preventing or curing the common diseases and disorders leading to long term disability should be sought with a view to reduce the health care cost.

Socio-economic variables associated with disabilities among aged people

The relationship between Socio-economic status and health is a well-documented epidemiological observation (Shari and Bassuk, 2002). With the declining importance of family based and other informal institutions for care of the elderly, financing aspect of the care of the aged comes to the forefront turning the issue of population ageing into an ageing crisis (Messcoub, 1999).

Some sociologists have found that social class or social stratification is a key factor influencing the plight of the elderly in all societies. Four factors such as occupation, income, property and education have been identified as influencing class positioning in ageing (Gordon, 1984). The loss of status can also be attributed to lack of positive,

[34] Mammography is an imaging technique that uses X-rays to provide a picture of the internal structure of the breast. The X-rays can show very small lesions before they can be found by any other method, including breast self-examination.

[35] Is an investigation used to identify the exact location and severity of all coronary arterial (blood vessels supplying the heart) blockages.

[36] It is the removal of occluding material from the carotid artery to restore normal blood flow through the artery.

[37] Endoscopy is a broad term used to described examining the inside of the body using an lighted, flexible instrument called an endoscope which is introduced into the body through a natural opening like the mouth or anus. The most common endoscopic procedures evaluate the esophagus (swallowing tube), stomach, and portions of the intestine.

creative role in society after retirement. But, ruling over all the class difference ill health can play havoc in a person's life, whether rich or poor (Moody, 1994).

In a longitudinal study done in National Institute of Aging USA, on prevalence and recovery rates of impaired mobility, it was found that, in both men and women, increasing age and lower income levels were associated with increased risk of losing mobility. This was after controlling for the presence of chronic conditions at baseline. Lower education levels were also found to be a significant risk factor for mobility loss in men, but not in women (Guralinik, 1993).

Several studies have shown a direct relationship between physical activity and health of elderly persons. This holds true for people of all ages. A few studies have looked into the effect of social activities on health. In one such population - based study, it was found that social and productive activities that involve little or no enhancement in physical fitness lower the risk of all cause mortality as much as fitness activities do. It was also observed that for persons with chronic conditions like arthritis, social activities might promote well-being more effectively than physical activity. Thus not only do social and productive activities act as complement to exercise program, but it may also prove to be alternative interventions for frail elderly people. It is also observed that the activities in which older people engage results in a complex array of effects beyond improved fitness. Social activities may involve a broad range of goals including leisure and enjoyment, strengthening of social status and sense of work, social engagement, and productivity (Glass et al, 1999). Another study found social and productive activities positive predictors of cardiovascular morbidity, blood pressure and coronary heart disease survival rate among elderly Americans (Athanasios et al., 2000).

Another study found that impaired lower limb function was significantly associated with older age (75+ years old), gender (female) marital status (unmarried), among those suffering from stroke and hip fracture. The study also found a linear increase in the risk of functional loss by number of medical conditions. These findings have implications for efforts to prevent or reduce lower limb dysfunction, as well as for the provision of community-based long-term care services (Markides et al, 1998)

Scientists from the University of Utah's Department of Psychology and Health Psychology Program in Salt Lake City studied 67 women and men to learn how cardiovascular health is related to age and social support. It was revealed that among

people with low social support diastolic blood pressure averaged 63; for young people, 74 for older people. In individual with strong social support, the average for young people was 67 and for older people 68 (Uchino, 1999).

In a study done in Gujarat state Patel observes that care shown by their family had direct influence on the mental problems of the aged. The chief mental problems found in this study are mental tension, fear of death, feeling of dependency, anxiety, feeling of loneliness, helplessness, uselessness whims and depression. The study found that though family members knew about physical illness of old people, both the elderly person and family members are less vigilant about mental illness. Out of the 200 people studied, only four people were found taken cared of by their family members for their mental illness (Patel, 1997). The magnitude of this problem is also very much ignored by the medical profession also.

Today, dependency is imposed on the elderly people by the community of younger generation. Several studies reported an increasing dependency on others because of want of residence, food, clothing, and medicines (Patel 1997, Dandekar 1996, Vijay Kumar S et al, 1985). One study reported that only 51 percent of the elderly people were consulted in family decision-making; and only twenty seven percent were able to help the family financially (Nayar, 1999). The elderly who have control over their income are found to be more independent. Also the proportion of elderly who consider themselves in good health rises with income**.**

Elderly women in India

In India and many of the Asian countries, the status of elderly women is mostly the stereo typed one of that of a caretaker. While her male counter part is free from the provider's role, elderly women continue the job of a housekeeper and also take on the new job of taking care of their grand children. Two-third of the elderly is living in rural India and majority are women. Her position in the family is largely determined by her economic position, availability of social support and marital and health status (Jamuna, 1998). Marginalisation of aged in the society act as a double-edged sword for the elderly women. First, in a region where women continued to be valued less than men, older women's health reflects their life long experience of discrimination, deprivation and neglect. Secondly because of inequalities in income and wealth in earlier life, older

women are also likely to have fewer material resources at their disposal and are less likely than men to receive assistance from relatives and friends (Hug, 1999).

Of the 329 old age homes in India while 6 percent are for male occupants, 14 percent are exclusively meant for elderly women (Rajan, 1995). The major cause of the women's economic inequality is the disproportional low educational level and participation in employment sector both organised and unorganised. Even those who do have some form of income lose it by way of gifting property to the children as the custom demands, sinking them more into dependence (Jayaprakash, 1996). Subsequently the elderly women's social and medical needs would be compromised at a time when they need most. The study conducted in Trivandrum city on health of elderly it was found that the actual amount of money spent for medical purposes was high for men though women's morbidity is higher (Uchino, 1999).

III

CONCEPTUAL FRAMEWORK AND METHODOLOGY

Conceptualisation

The key concept in this study involves a redefinition of causes of ill health. Biomedical scientists identify such conditions as disease, nutritional disorders, and de generative diseases and so on. Biologically this is correct, but it is important to note that ill health and disabilities are consequences of bio-social interactions. An approach to medicine incorporating both medical and social elements would be fruitful; and this study was an attempt in this direction. The basic premise is that, while the cause of disability is biological, the determinants of immediate biological factors may be a chain of contributing sociological and behavioural events.

The key to this model is the identification of a set of proximate variables that directly influence the health of the elderly. The socio economic variables operate through these variables to affect their ill health and disabilities. The primary data for the study is collected through a sample survey of elderly person residing in their homes.

Concepts and definitions

Unreported Needs: Many medical, social and nursing needs go unreported to the health care delivery system and to the community comprising also of the family in which the elderly people reside.

Elderly People: People aged 65 and above residing in their own home or home of the relatives.

Accommodation of Elderly People: Means the house in which the elderly person lives. It largely shows the financial set up of the family

Sleeping Arrangement: The particular space or room that is provided for the elderly person to sleep in context of the rest of the house. If the family in which the elderly person lives is poor, if he/she is given a space or room that is as good as that of other persons the sleeping arrangement is considered as good/satisfactory. But even if the house is very good but the person is given a dark corner to sleep it signifies lack of care giving and the particular instance will be graded as poor sleeping arrangement

Living Environment: The environment in which a person has to spend a major part of his daily life has great influence in their feeling of well-being. Here the environment

comprises of the type of accommodation the space for movement, location of the toilet, sleeping arrangement, etc.

Life Attitude: The manner in which the elderly either reflects on or approaches life's unknown variables. This may be with hope/contentment, or with regret/indifference, and many more attitudes.

Diseases and Disabilities: Are diagnosed based on the clinical examination conducted, the investigations done and also using the previous medical records if available.

The study area

The study was conducted in two suburban hamlets near Thiruvananthapuram city. Of the two hamlets selected, one was in Kudapanakunnu panchayat bordering Thiruvananthapuram city and the other in Pallichal panchayat, about 10 km from the city. The choice of hamlets was made taking into consideration the expected co-operation of the people for medical examination for a research purpose and access to laboratory facilities. In Kudapanakunnu panchayat, wards 10 and 11 were selected and is a suburban area. This area has good access to a medical facility. The Peroorkada district hospital is situated 1 km away. There is a well-established private hospital about 2 km away with specialities like Gynaecology, Paediatrics and Psychiatry in addition to General Medicine. There are also some private practitioners practising in the locality. There is good access by way of transportation to all the health care centres including Medical College Hospital. There is also provision of safe drinking water and sanitation in the locality. The population in this area consist mainly of lower middle class and poor households interspersed with a few affluent households. The sources of income are mainly from services sector like employment in the government, semi-government organisations, and in trade and commerce.

The second study area, which is in Pallichal panchayat, is a typical rural area. The population is mainly agrarian in nature. The nearest government hospital is 2 km away from the area. There are allopathic private practitioners, alternative medical practitioners and quacks in the locality. Provisions of safe drinking water by way of well in most of the houses and transportation facility are present. The houses are spread out. This area also includes slum like dwelling in which most of the residents are Muslims.

Survey design

In each ward, a list of persons of age 65 and above was prepared by visiting all the households in the ward. An investigator who was given special training for the work did the preparation of the listing of elderly people. The latest voters' list was used to identify the houses. While listing the elderly persons, the age and sex of the persons were also noted. The elderly persons in each ward were then stratified by sex and age group (the age group adopted were 65-70, 71-74, 75-79, 80 and above). The sample size for each area was tentatively fixed as 60 and this was allocated to each stratum in proportion to the number of elderly persons in the stratum. However, if the number of elderly persons in any stratum happened to be not more than 2, all the individuals in it were included in the sample. The total number of persons to be covered was proposed to be covered was 120 but only 100 persons could be studied.

Method of data collection

Three types of data were collected for the study.

i) Clinical data regarding the selected individual.

ii) Socio-economic data related to the individual and his/her household.

iii) Results of interaction with the elderly person and the household members.

The team consisting of the principal investigator (who is a medical practitioner), a paramedical professional, and a sociologist visited the homes of each selected person and collected the required data. On an average three visits were required to collect all the relevant data. In the first visit, the purpose of the study was explained to the selected person and the members of the household and a rapport was built with them. With the permission of all concerned, medical history taking (details of the present ailments if any and that of the past ailments) and clinical examination of the person were carried out. It is the researcher's experience that the persons talks and confides a lot to the medical practitioner during the medical examination. For a clinical examination, a medical kit containing a stethoscope, a sphygmomanometer, equipment for taking blood for investigations, Snellen's chart for assessing vision and a tuning fork was used by the team.

In the second visit blood sample was collected for basic investigations. For this purpose, 3 to 5 visits were targeted each day and samples were collected by an experienced paramedical person. The results of investigation done in the previous one

month by the person for his or her medical condition were also taken into account. Twenty three percent of the participants declined blood investigation. In the third visit the soc io-economic background was probed by the sociologist and information on relevant variables were collected. For this study a structured schedule was used. In some cases, the conversion with the elderly persons and the household members was recorded using a tape recorder. The consent to use the tape recorder was taken from each participant, promising the confidentiality of the conversation. Though it was in the second visit that the socio-economic variables were identified all three visits were made use of to get a holistic picture. With each visit, the persons confided more readily to the researchers.

IV

SOCIAL LIFE OF ELDERLY: FINDINGS FROM THE SURVEY

According to the project plan a sample of 120 elderly persons aged 65 years and above was to be interviewed and examined. However, some of the persons selected for the study could not be covered as either they were not in their homes at the time of the team's visits or refused to be clinically examined. As far as possible, such cases were substituted by other elderly in the nearby houses. Even so, the data set that could be finally organized consisted of the particulars of only 100 elderly persons. To that extent the final sample may not form a true representation of the cross section of the elderly persons in the selected area. The analysis given below is carried out keeping this in mind.

During the time of visit there were instances in which other members of the household also requested a medical check up, and the investigator had to oblige as a medical professional. However, particulars of these examinations were not included in the final data set.

In the sample studied, 36 percent of the elderly were men and 64 percent were women. According to the 1991 census figures 46 percent of the people in this age group were men and 54 percent women. In the sample studied the proportion of elderly women was higher. The deviation from the State's elderly population was seen in age distribution in the sample also. While nearly two-thirds of the elderly persons in the state were in the age group 65 to 74, in the sample studied only 53 percent were in this age group. (See table 4.1)

Table 4.1 Distribution of sample persons by age and sex

Sex	Age group in the completed years				All ages
	65-69	70-74	75-79	80	
Male	7	9	14	6	36
Female	21	16	13	14	64
All	28	25	27	20	100

The reason for the deviation is mainly the non-response and the absence of elderly persons in the houses as pointed out earlier. Most of the persons that had to be left out were in the age group 65-74 and the majority of such persons were men. In spite of this

slight distortion, the sample could throw light on the characteristics of the elderly persons, as will be seen from the survey results given in the following paragraphs.

Demographic characteristics of elderly

In the sample studied, 32 percent of the elderly people were found to be illiterate. About 75 percent of the selected elderly men have level of education secondary and above, while among women only 47 percent have educational qualification up to this level. This indicates that educational attainment of elderly women is generally low as compared to that of elderly men. (See table 4.2)

Table 4.2 Educational status of elderly (%)

Educational status	Males	Females	All
Illiterate	11	44	32
Primary 1-4 years	14	9	11
Secondary and above but lower than graduation	67	45	53
Graduation and above	8	2	4
All	100	100	100

The survey result shows (table 4.3) that 43 percent of the elderly people were currently married and the remaining were single, in the sense that they were either widowed or separated or were never married. Widowhood was higher among elderly women as compared to elderly men. While 75 percent of elderly women are reported to be either widowed or separated, only 22 percent of elderly men come under this category. Lower age of marriage of women and increased longevity enjoyed by women may be the reasons for this situation.

Table 4.3 Marital status of elderly (%)

Marital status	Male	Female	All
Never Married	3	--	1
Married	75	25	43
Widowed	22	70	53
Divorced/ Separated	--	5	3
All	100	100	100

Among the elderly persons nearly 57 percent were either not working or did not want to work, most probably due to advanced age. About one-third was engaged in household affairs and only 8 percent are working as earners. Those engaged in household work were mostly women. See table 4.4.

Table 4.4 Activity status of elderly

Current activity	Males	Females	All
Household affairs	14	45	33
Working full time/ part time	19	1	8
No work, but like to work	3	1	2
No work & do not want to work	64	53	57
All	100	100	100

Living environment

About one-tenth of the elderly people studied were couples living alone. Others live either with their children, or with close relatives. One woman was found to be living alone in a shabby one-room apartment in extreme poverty. She was 72 years old and was afflicted by multiple diseases, but could afford to buy medicine only for one of the afflictions and that too with the help of neighbours. It is often said that in the modern family system elderly people are a neglected lot. One of the indicators of this is the accommodation provided to the elderly, relative to the resource availability of the household. An assessment was made regarding both the suitability of accommodation and sleeping arrangement as per the perception of the investigating team. It was found that the accommodation of about 8 percent of elderly men and 14 percent of elderly women was grossly unsuitable for their needs. 64 percent of elderly men and only 48 percent of elderly women enjoyed good accommodations. (See table 4.5.) Of course, suitability of accommodation does not necessarily guarantee a good living arrangement for the elderly person. Available sleeping arrangement was also assessed. For about one fifth of the elderly, sleeping arrangement was found to be inadequate. We found an elderly lady living in excellent accommodations with her well-placed son; she sleeps on a platform made by placing together two benches. The lady has impaired physical mobility due to very poor eyesight and osteoarthrits of both knee joints, and she is very depressed.

To sum up, among elderly people, men were found to be more educated and some of them still working. Widowhood was more among elderly women; they were less educated and were mostly involved in household affairs. Most of the elderly people especially elderly women live with their children. Though accommodation was suitable for about half of the elderly people only about one-third had good sleeping arrangement. It was observed that a grand house does not guarantee good accommodation including sleeping arrangement.

Table 4.5 Living environment of elderly people (%)

	Male	Female	All
Living arrangement			
Couple living alone	14	6	9.0
Individual living alone	--	2	1
Living with married children	61	78	72
Living with unmarried children	17	11	13
Living with close kin	8	3	5
Accommodation			
Suitable	64	48	54
Slightly unsuitable	28	38	34
Unsuitable	8	14	12
Sleeping arrangement			
Good	33	28	30
Satisfactory	44	53	50
Bad	23	19	20

Status of elderly in the family

When the person who was the provider and head of the family retires from their active employment and becomes old, it is seen that his or her role in the family changes. This can happen automatically or might even become imposed upon the person. In the study we tried to get an insight on this matter by looking into various factors such as who heads the family at present, source of income of the elderly person, whether this income is adequate, whether the elderly person's advice is sought in matters concerning the family, etc. These questions were probed using structured, unstructured and open-ended questions. Specific enquires in repeated visits helped to get a better insight into these aspects.

As given in table 4.6 it was found that either the elderly person or the spouse heads about 43 percent of the household. While 68 percent of the elderly men were heads of household, the percentage of elderly women heading the house is only 30. About 70 percent of elderly women reside in households headed by either their children or their respective in-laws, the elderly men residing in similar situation is only 32 percent.

Adequacy of income was assessed initially by asking direct questions; probing questions were asked about their day-to-day needs, incidental needs and how they handled different financial situations. About 59 percent of the elderly had some sort of income either by way of employment, pension or other savings, but for only for 39

percent the income was adequate for their needs. For one-fourth the income was quite inadequate. (See table 4.7)

Table 4.6 Position of the elderly persons in the household

Head of household	Male	Female	All
Self/Spouse	68	30	43
Son/Daughter	19	42	34
Son/daughter in law	8	27	20
Others	6	2	3
All	100	100	100

Table 4.7 Income of elderly persons (%)

Source of income	Male	Female	All
No Income	36	43	41
Employment	6	6	6
Pension	53	27	36
Property/savings		2	1
Other source	6	22	16
All	100	100	100
Adequacy of income			
Adequate	47	34	39
Barely ade quate	28	34	32
Inadequate	17	23	20
Not managing	8	9	9
All	100	100	100

It was found that most of the elderly persons had either no property of their own or had gifted their property to their children. In fact only 10 percent of the elderly persons were found to have at least some property of their own. However, some elderly people were found to manage the property of their children.

About half of the elderly persons were only rarely consulted for family matters, and among those from whom advice was sought; men were consulted more often than women. It was found that advice was sought more often from among those with adequate income than from others. It was also seen the sleeping arrangement provided to the elderly person in the family was associated with the status the person enjoyed in the family. Elderly people with adequate income, enjoy either good or satisfactory sleeping arrangement, whereas, with some persons with inadequate income and most people with no income had unsuitable sleeping arrangements. That is to say, the financial stability of elderly persons did influence his/her status in the household.

Aspects of developmental ageing

Usually, with advancement of age people experience decline in the functioning of some of the organ systems like hearing, vision, taste and memory. Elderly people adopt various measures to cope with such changes. In the study, an attempt was made to find how the elderly people cope with these changes.

About two-third of the elderly people said that their memory was good. Among those with loss of memory about three-fourth were able to cope with the disability with the help of family members. With old age people also lose their taste for food. About one-third of the elderly people studied felt that food was not at all tasty, and about 40 percent said that the food they eat was somewhat tasty.

Vision

Vision was checked using the standard chart to test vision called 'Snellen's Chart". Among those elderly who were illiterate, vision was assessed using finger counting at different distances. Most of the elderly persons had visual defects ranging to various degrees. About 3 percent of elderly male and 6 percent of elderly females suffer from severe form of visual defect including blindness. About 66 percent of elderly men and 85 percent of elderly women suffer from slight to moderate visual defect. See table 4.8.

Table 4.8 Visual defects of elderly

Vision	Male	Female	Total
No defect	31	9	17
Slight visual defect	36	61	52
Moderate defect	30	24	26
Sever defect	3	6	5
All	100	100	100

Hearing

One of the modalities of sensation that is thoroughly ignored by the elderly and the general population alike is hearing loss. In the study it was found that most often hearing loss gets undermined by simultaneous afflictions. We found that for 17 percent of the elderly are suffering from moderate to sever loss of hearing. We came across two elderly men suffering from severe hearing defect; both were active otherwise and were not suffering from any other major detectable disorders. They were aware of their

disability; one was waiting for a hearing aid but the other person refuses to wear a device. See table 4.9.

Table 4.9 Hearing disability of elderly (%)

Hearing	Male	Female	Total
No defect	58	59	59
Slight defect	25	23	24
Moderate defect	11	14	13
Sever defect	6	3	4
All	100	100	100

Physical mobility among elderly

Mobility is the most important functional ability that determines the degree of independence and health care needs among older persons. On retirement from their regular jobs, most of the elderly are seen to prefer the comforts of indoors. Their vague complaints of sense of fatigue, aches and pains often go unheeded. But careful history taking often reveals that it is not only arthritis and other locomotor problems that bind them indoors. Several potentially curable medical problems also claim a major share. In older people, a fall may be a non-specific presenting sign of many acute illnesses, such as pneumonia, urinary tract infection, myocardial infarction, or even the result of an acute exacerbation of a chronic disease. There are also arrays of invisible social factors that bind the elderly indoors, which the busy practitioner in clinics may fail to notice. The paradox is that the same factors need to be addressed if meaningful welfare programmes are to be directed at the needs of elderly people. Scarcity of data exists on the prevalence of the problem of impairment in mobility among the elderly population and on the social and medical correlates of such impairment.

In the present study it was found that nearly one-fourth of the elderly persons suffer from impairment in mobility, which restrict the person's movement outside of the house. As compared to men, a larger proportion of women in the group studied were found to have difficulties in movement. While 42 percent of the men were fully mobile, among women only 27 percent were found to be in this category. See table 4.10.

Table 4.10 Physical mobility among elderly

Mobility status	Males	Females	Total
Fully mobile	42	27	32
Some difficulty	44	48	47
Mobile inside home	8	14	12
Some difficulty inside home	3	9	7
Bedridden	3	2	2
All	100	100	100

During the team's interaction with the elderly persons, it was noticed that their major cause of worry was the difficulty in movement due to ailments like arthritis, acute asthma. In other words, they associate deterioration of health with mobility impairment. Taking the cue, the data were re-tabulated. For this, those who have difficulty in 'going out' were treated as having mobility impairment. The tabulated results are given in table 4.11

Table 4.11 Impaired mobility and the perception about life

Perception on deterioration of health	Number of persons having		
	No mobility impairment	Mobility impairment	Total
To a large extent	42	20	62
To some extent	23	1	24
Not much	14	--	14
Total	79	21	100

While the research was being done, it was felt that those elderly people with impaired mobility were more apprehensive about life. Given this factor it is worthwhile to examine the life attitude of those with impaired mobility. So chi-square test was done to assess if there is association between mobility impairment and attitude towards life. See table 4.12. It will be seen that compared to persons with no impairment, those with impairment are more worried, and also that their health has deteriorated to a large extent.

Table 4.12 Impaired mobility and attitude towards life

Attitude to life	Impairment in mobility		
	No impairment	Impairment present	Total
Happy	31	2	33
Worried	37	16	53
Indifferent	11	3	14
Total	79	21	100

$\div^2$=8.01 significant at 5 % level of significance

Use of intoxicants among elderly

During the interviews an attempt was made to ascertain some of their substance habits like pan chewing, smoking, sniffing or alcoholic usage prevalent among the elderly. A large number of elderly people especially women were found to have the habit of pan chewing during active life and some are continuing it. In fact about 45 percent of the elderly were users of pan and the majority of them are still continuing. As for smoking one-fifth of the males used to smoke during their active life and some continues the habit. Surprisingly even among women there were a few smokers. As regards to alcohol consumption, the habit was found only among few males, and they say that they had discontinued it in their later years.

Care of the elderly

Since most of the elderly persons studied are living either as couple or with close relatives, they get some kind of care. Among males, about two-third get care from their wives and for the remaining the caregivers are children or their close relatives. In the case of women, nearly two-third is taken care of by their children or their close relatives. (See table 4.13)

Table 4.13 Care of elderly (% of persons)

Care giver	Male	Female	Total
Spouse	67	9	30
Son/daughter	17	41	32
Son/daughter or close relative	13	45	34
No caregiver	--	5	3
Care not needed	3	--	1
All	100	100	100

The fact that there is a caregiver does not necessarily mean that the elderly get adequate care. From close observation and interaction, it was found that care received was adequate only in the case of 60 percent of the respondents. For the remaining 40 percent, care giving was thoroughly inadequate or lacking. There are a few cases in which the relation with the caregiver is strained. In most of the cases the relation is found to be good or somehow the elderly people cope with the situation.

From interaction with the elderly it was found that about half of them are worried for some reasons while about one-third lead a happy life. The remaining people are indifferent of their health and living conditions. Those who are found to be happy have

either very good relation with their caregiver or are coping well. Most of those who were found to be worried or indifferent also maintain somewhat good relation with their caregiver. However, those who have strained relation with the caregiver were certainly worried or indifferent. It seems that the overall attitude to life and relation to the caregiver are not associated. The picture emerged is given in the table 4. 14.

Table 4.14 Relation with caregiver and life attitude

Relation with care giver	Life attitude			
	Happy	Worried	Indifferent	Total
Very good	11	36	36	35
Coping well	64	49	36	52
Slight strain	--	11	14	8
Severe strain	--	2	--	1
No care giver	--	2	14	3
Care not necessary	3	--	--	1
Total	100	100	100	100

Social interaction

With advancement in age social relations also tend to weaken for various reasons. Participation in social, cultural and religious activities begin to diminish. Only about one-third of the elderly maintain close relationship with their friends and frequently meet them, and these are mostly men. For about one-third of the men and more than half of the women in the sample studied reported that they had no close friends and that they rarely go out. Only about 40 percent of the elderly people participate in outside activities and that too is mainly in religious activities and social functions like marriages, or family gatherings.

V

RESULTS FROM CLINICAL EXAMINATION

How the elderly perceive their health

Before carrying out a detailed clinical examination, an attempt was made to find out how the elderly persons perceive their own health status and their general attitude about life. Nearly two-thirds of the elderly interviewed said that their health has deteriorated to a large extent and about one-third feel that their health has deteriorated to a lesser extent. See table 5.1. In their younger years most of these persons especially women were indifferent about their health. As for men, those who were concerned about their health had timely medical check-up, regular exercise, avoided smoking and consumption of intoxicants. It is seen that the extent of deterioration is comparatively higher among those who are manual workers or those engaged in domestic work.

From the team's interactions with the aged, their attitude to life was assessed and they were categorised as worried or as not worried. It was found that about half of the persons were found to be worried; but the exact cause of worry could not be clearly identified. It was surprising to note that all those who felt that their health was deteriorating were not necessarily worried. In fact among the 86 persons who felt their health was deteriorating 38 persons were not at all worried. In order to test whether there is association between deterioration of health and life attitude, the data were re-tabulated and subjected to a chi-square test. The test indicates that there is no significant association between deterioration of health and life attitude. This finding seems to be surprising as the general belief is that the deterioration of health is an important factor among the troubles of old age.

Table 5.1 Perception on health and attitude about life (number of persons)

Perception on health	Life attitude		
	Worried	Not worried	All
To a large extent	36	26	62
To some extent	12	12	24
Not much	5	9	14
All	53	47	100

$\div^2$=0.75, not significant at 5 percent level of significance

Ailments of elderly

With old age most of the elderly people face deterioration of health, which may be the reflection of the abuse that the body is subjected from young onwards. As part of the study the elderly persons in the sample were subjected to detailed clinical examination to identify their aliments and health problems. In most of the cases, basic blood investigations were also carried out. The results of the clinical examinations are discussed below.

The common problems that trouble the elderly persons are arthritis, hypertension, chronic respiratory disorders, indigestion and gastritis. Among the elderly people the prevalence of stroke and heart diseases is higher. A chance of getting afflicted with terminal illnesses like cancers is higher among elderly people when compared to other ages, and this needs special attention. The pattern of general aliments identified in the sample is presented in the table 5.2 and 5.3. In the study population, arthritis was found to be the commonest affliction of the elderly people, followed by diseases affecting the heart and blood vessels of the body.

Table 5.2 Prevalence of disorders affecting different systems

Ailments	Percent of persons having ailment		
	Male	Female	Total
Respiratory diseases	22	19	20
Cardiovascular diseases	33	39	37
Peripheral vascular disease	33	39	37
Gastro-intestinal	19	25	23
Central nervous disorders	--	2	1
Genito urinary disorders	3	13	9
Loco-motor system disorders	25	59	47
Endocrine disorders	14	20	18
Other ailments	8	8	8

Table 5.3

Specific diseases affecting different organ systems in the body (% affected persons)

Ailments	Male	Female	Total
Respiratory system disorders			
No problem	78	81	80
CC bronchitis	11	10	10
Asthma	11	8	9
Ac respiratory infection	--	1	1
Cardiovascular disorders			
No disorder detected	68	61	63
Hypertension	16	31	26
Angina	6	2	3
Myocardial infarction (MI)	6	3	4
MI + Hypertension	2	2	2
Rheumatic heart disease	2	2	2
Peripheral vascular disorder			
No disorder	68	61	63
Disorder present	32	39	37
Gastro-intestinal disorders			
No disorder	80	75	77
Gastritis	8	17	14
Abdominal Hernia	3	6	5
Abdominal mass	--	2	1
Inquinal Hernia	3	--	1
AH+ Rectal Prolapse	3	--	1
Rectal cancer	3	--	1
Genitourinary disorders			
No disorder	98	87	91
Urinary tract infection (UTI)	--	6	4
Uterine prolapse	--	3	2
UTI + Uterine Prolapse	--	2	1
Benign Prostatic Hypertrophy	2	--	1
Uterine cancer	--	2	1
Loco-motor system disorders			
No disorder	75	41	53
Osteo arthritis	22	54	43
Rheumatic arthritis	3	5	4
Endocrine disorders			
No disorder	86	80	82
Diabetes	14	17	16
Multi nodular goiter	--	3	2
Central nervous system disorder			
No disorder	100	98	99
Stroke	--	2	1
Psychiatric disorders			
No problem	47	42	44
Depression	47	53	51
Obsessive psychosis	--	2	1
Dementia	6	3	4

Diseases affecting respiratory system

Of the 20 percent of elderly people who suffer from some form of respiratory condition about 10 percent suffer from asthma and another 10 percent have chronic bronchitis. Only 1 percent suffers from acute respiratory infection.

Cardio vascular diseases

Cardio vascular diseases are those disorders affecting the heart and major blood vessels. Symptoms and signs most common to this disorders are chest pain, difficulty in breathing, and high blood pressure. High cholesterol level in the blood and diabetes are major risk factors. Myocardial infarction more commonly known as heart attack and stroke resulting in brain damage and paralysis are the two grave conditions appearing in old age. Women share the same risk as that of men in acquiring cardiovascular problems after menopause. However, it was found that while 30 percent of the elderly women had hypertension, this was only 10 percent among men. The prevalence of myocardial infarction, angina and rheumatic heart diseases are more or less same in elderly men and women.

Diseases affecting the peripheral vascular system

Peripheral vascular disorder is characterized by the decreased blood flow to the extremities mainly in the legs resulting in the in restriction of movement of the legs. The affected person will experience pain after walking for some time and gets relief by taking rest for some time (claudication). Elderly patients who are relatively sedentary and do not walk far enough to induce claudication which may present with foot pain at rest or even gangrene. This is a disorder that is likely to be missed in the early stage of the illness, and is often misinterpreted as arthritis. Risk factors for peripheral atherosclerosis include cigarette smoking, diabetes mellitus, hyperlipidemia (increased lipid level in the blood), hypertension, family history, age, and in women, in addition to these factors, early hysterectomy[38] and oophorectomy[39].

In the study sample, the clinical evidence of this disorder was found in 33 percent of males and 39 percent of females. Except for one elderly woman who is under treatment, none of the other cases were diagnosed. The elderly people are bearing the pain either as “part of aging process” or as arthritis.

[38] Surgical removal of uterus.
[39] Surgical removal of ovaries.

Diseases affecting gastrointestinal system (GIT)

The disorders affecting the stomach and the intestine are included in gastrointestinal system disorders. These disorders affect function of absorption and digestion of food. A variety of alimentary symptoms like abdominal pain, regurgitation heart burns, anorexia or loss of appetite nausea, vomiting abdominal distension flatulence are collectively termed as dyspepsia. Dyspepsia can be a manifestation of gastritis (inflammation of stomach), which is very common and also may be due to cancer. Alcohol and some drugs like painkillers and antibiotics also cause dyspepsia. Another common manifestation suffered in old age is constipation.

The prevalence of GIT disorders is slightly higher among elderly women compared to elderly men. The prevalence of gastritis is about 8 percent in males and 17 percent in females. The prevalence of abdominal hernia is also seen in a few elderly persons. Hernia is a protrusion of a portion of intestine or other tissue through a weak portion of the abdominal wall. One man suffering from abdominal hernia is 87 years old and is also afflicted with asthma. He used to be a very active man, very popular in his area for his smartness. The affliction has left him homebound quiet contrary to his nature. His main worry is loneliness and impaired mobility. His wife who is mostly busy in kitchen, and does not have time to give him company, for which he is irritable. The disorder of abdominal hernia that has afflicted elderly females is all unreported. Neither family members, nor the doctor they consulted were aware about it. An inguinal hernia was found in one man and he had this problem for quiet some time and at a stage where surgery is imperative. His family members are not aware of this problem which can after some time present as acute emergency. Rectal prolapse was found in another man. Most of the conditions affecting GIT were unknown to family members and doctors.

Diseases affecting genitourinary system

These are disorders affecting urinary apparatus and reproductive system. The most prevalent among Genito-urinary disorders was the urinary infection (UTI), which can be detected and treated easily. Cervical cancer affecting women is one of the curable cancers, if detected early. UTI may present atypically in elderly, for example with out pain during urination. It is very important for doctors to be vigilant. In the sample those detected with UTI were females; but none of these had been identified earlier. Of the two women with uterine prolapse, one was undetected and was in the third stage of

the disorder, where surgical correction is imperative. She was treated with painkillers for her back pain, which really had its roots in uterine prolapse, and was never diagnosed by her doctor. Equally unreported was the cervical cancer in the terminal stage found in another woman and a benign prostate hypertrophy was reported by one man. This can be an underestimation, since manual examination is needed for these conditions. The main symptom of this common affliction of those afflicted with benign prostatic hypertrophy is progressive obstruction to urinary flow.

Diseases affecting loco-motor system

The loco-motor system helps a person to move about and be independent. The main ailments of this system are different types of arthritis. The system includes upper limbs (arm and hand), lower limbs (legs) and spine (back bone). Diseases of bones and the structures joining the bones can manifest as symptoms like pain and stiffness. In the study, loco-motor system disorder was found in almost half of the elderly people. Of this 43 percent had osteo-arthritis (OA) and 4 percent rheumatic arthritis (RA). The percentage of women with osteo-arthritis was much higher (58 percent) compared to men (22 percent). During the survey an extreme case of RA was found in a 72-year-old woman with deformed upper and lower limbs and she has been bedridden for the past 2 years. She also developed some visual problem which resulted in loss of sight in both eyes over the past 5 years. The poor vision made her home bound worsening the arthritis. But what is more eluding is that she has never consulted a doctor either Allopathic or Ayurveda for her arthritic problem.

Diseases affecting endocrine system

Endocrine organs are those organs concerned with synthesis and secretion of hormones. The hormones co-ordinates activities of the cells in all organs of the body. We are able to detect only two types of endocrine disorders clinically using the basic investigations for diabetes and a disorder of thyroid called goiter, characterized by enlargement of the thyroid gland. Diabetes was detected in 16 percent of the elderly, and all these had been detected earlier. Multi-nodular goiter was found in 3 women, of which one case was unreported. A very common disorder of thyroid in old age is hypothyroidism. Though a number of elderly persons presented with symptoms suggesting this disorder, a definitive diagnosis requires a costly investigation. This finding was not included in the study.

Psychiatric disorders

Diagnosis of psychiatric disorders is mainly based on recognised patterns of subjective symptoms, which are volunteered by the patient or elicited during a clinical interview. For organic disorders, a physical factor can be detected, for example extensive brain disease leading to dementia. But for functional disorders like schizophrenia and major depression, such factors could not be detected. In the study, Hamilton's depression scale was used to detect and grade depression. Other major psychiatric disorders were detected making use of available medical records. Depression was very much prevalent among elderly persons. In fact, about half of the elderly people had symptoms of depression of varying degrees. A few of the elderly (4 percent) were affected by dementia characterized by decline in intellectual and cognitive functions.

Results of blood and urine investigations

In busy clinics the elderly patients are not usually subjected to clinical investigation. The recent development of geriatrics as a specialty may improve and change this situation. In the current situation where the prevalence of diabetes and hypertension is on the raise, we decided to do some of the basic investigations to detect these ailments and other common diseases like urinary tract infection, anaemia and the like. (A copy of the results of blood investigations done was given to the participants). Among the study population 23 percent declined blood investigation. See table 5.4.

Table 5.4 Haemoglobin level in blood

Haemoglobin	Males	Females	Total
Normal	64	52	56
Mild anaemia	22	40	34
Moderate anaemia	7	8	7
Severe anaemia	7	--	3

Table 5.5 Erythrocyte Sedimentation Rate (ESR)

Normal range of ESR value (mm/hr)		Values found on investigation		
Males	Females	Males	Females	All
< 30 mm	<50	70	60	64
30-50	50-100	22	35	30
50+	100+	8	5	6

Certain blood values were interpreted differently for men and women. Normal haemoglobin level ranges between 12 mg percent (milligram percent) and 14 mg

percent for men and between 11 mg percent and 13 mg percent for women. Anaemia represents simple reversible nutritional deficiency to grave conditions like cancer. Elderly people especially need to be cautious, as cancerous conditions, which are common among them compared to the general population. Moderate to severe anaemia was found in 10 percent of elderly people. Normal ESR or erythrocyte sedimentation rate is below 10 mm/hour (millimetre/hour). But this rate is seen to be elevated for women with out any ailments for up to 30 to 40 mm/hour. ESR is increased in conditions such as arthritis, chronic infections like TB. In this study for women an ESR up to 50 mm was taken as normal and for men a value of 30 mm and below is taken as normal. In the table the values are given as rate of sedimentation in millimetres per hour. (See table 5.5.)

There is controversial opinion about the normal range of blood cholesterol. Also it is difficult to comment of the blood level with the estimation of total cholesterol alone, as the different components of cholesterol have significance. The abnormality in the total cholesterol level in the blood may be an indication for further investigation. Normal cholesterol is taken as below 200 mg percent. We found that 42 persons have cholesterol level above 200 mg percent, out of this 30 have cholesterol levels between 200 - 250 mg percent and 8 persons have cholesterol level above 250 mg percent.

Other blood investigations done were total count of white blood corpuscles (WBC) and differential count (DC). Both were basic investigations done to support the diagnosis of acute infections and certain allergic conditions. In the differential count a type of WBC called ‘esinophils’ were found to be increased above normal range for about 18 percent of the elderly people. A high count usually signifies allergies to common allergens. Other components were found within a normal range.

On routine urine examination, 6 elderly people were found to be having urinary tract infection. All were found in women not reported. Though increased frequency of urination was complained of when specifically asked, no one complained of pain on micturation, or fever, which are the usual presenting symptoms in the case of young adults.

Life perception of the elderly

To understand how the elderly people view the various facets of their life, they were requested to recall the good and bad things that have affected their life, as they see them. The responses are given in table 5.6.

Table 5.6 Perception by elderly (percentage of yes /positive response)

Perception by elderly	Male	Female	All
Good things in life			
Care by dear and near	53	50	51
Plenty of rest and leisure	67	48	55
Freedom from responsibilities	39	41	40
Having a lot of friends	20	9	13
Ability to work in this age	19	10	14
Ability to achieve life's goals	25	14	18
Ability to face life with equanimity	33	5	15
Bad things in life			
Ill treatment from close relatives	22	22	22
Indifference of close relatives	28	28	28
Loss of close kin	25	39	34
Declining health	64	73	70
Financial difficulty	36	45	42
Disappointment in achieving goals	19	28	25
Nothing to look forward to	33	41	38
Loneliness and isolation	47	58	54
Nothing bad in life	14	26	22

From the responses it would be seen that most of the elderly feel that declining health is one of the problems they face in old age. Even though 70 percent of the responses were about declining health, it is interesting to note that more than half of the elderly people find comfort in having care by near and dear and also having plenty of rest and leisure. Freedom from responsibilities is also seen as a good thing in the advanced ages. About 54 percent of the elderly feel loneliness and isolation, and 42 percent have financial difficulties. An examination of the individual response indicates that some of the queries have similarities and hence the responses may be related to some underlying common characteristics. In order to find out whether there is any under lying similarities among the responses, correlations were computed. Preliminary analysis of the results show that the following groups are associated with correlation coefficient exceeding +/- 0.30

Group I

a) Care of dear and near.

b) Freedom from responsibilities.

c) Plenty of rest and leisure.

d) Goals not achieved.

e) Financial difficulties.

f) Nothing to look forward to.

Group II

a) Loss of close kin.

b) Loneliness.

c) Nothing to look forward to.

Declining health was not found to be associated with any of the other variables. The correlation coefficient indicates that there may be some underlying factors that have prompted the responses. The data was therefore subjected to factor analysis using the principle component analysis method.

The first four factors extracted and their factor loadings are given in Table 5.7

Table 5.7 Factor loadings

Factors	Variable	Loading
Factor 1	1.Care of dear and near	0.72
	2.Freedom from responsibilities	0.71
	3.Plenty of rest and leisure	0.48
	4.Financial difficulties	-0.59
	5.Indifference of dear and near	-0.40
Factor 2	1.Dissapointment in achieving goals	0.78
	2.Nothing to look forward to	0.64
	3.Financial difficulties	0.52
	4.Plenty of rest and leisure	-0.40
Factor 3	1.Loss of close kin	0.73
	2.Isolation and loneliness	0.77
	3.Nothing bad in life	-0.61
Factor 4	1.Ability to view life with equanimity	0.82
	2.Ability to achieve life's goals	0.58
	3.Plenty of rest and leisure	0.43

Identification of the factors

The first factor is particularly associated with care of dear and near and freedom from responsibilities and negatively associated with financial difficulties. It would appear

that the factor is financial independence. Adequate income either by way of pension or income from assets would help the elderly to lead an independent life. Only in such situation, even close relatives would extend care. And this is the most important factor accounting for 22 percent of the variance.

The second factor is positively associated with disappointment in achieving life's goals, nothing to look forward to and negatively with plenty of rest and leisure. The factor seems to be disappointment due to financial insecurity.

The third factor is related to a feeling of loneliness resulting from death of close kin most probably the spouse.

The fourth factor extracted relate to the philosophic way of looking at life. Some persons cultivate this and lead a peaceful life at the latter period of their life. The above four factors account for over 50 percent of the variance.

In none of the eight factors extracted declining health come as an important variable. The elderly accept that their health is declining but their attitude to life is not mainly dependent on health condition, rather it depends on various factors like financial independence, company of dear and near, achievement of life goals, mental attitude or mental disposition. The detailed statistics of the factor analysis is given Tables 5.8, 5.9 and 5.10.

Table 5.8 Communalities

Variables	Initial	Extraction
Care by near and dear	1.000	.596
Plenty of rest and leisure	1.000	.640
Freedom from responsibilities	1.000	.613
Having lot of friends	1.000	.578
Ability to do work even in this age	1.000	.719
Ability to achieve life's goals	1.000	.510
To face life with equanimity	1.000	.772
Ill-treatment from close relatives	1.000	.635
Indifference of close relatives	1.000	.636
Loss of close kins	1.000	.702
Declining health	1.000	.637
Financial difficulties	1.000	.657
Disappointment in achieving goals	1.000	.669
Nothing to look forward to	1.000	.592
Loneliness and isolation	1.000	.630
Nothing bad in life	1.000	.673

Extraction Method: Principal Component Analysis.

Table 5.9 Total Variance Explained

Component	Initial Eigen values	Percent of Variance	Cumulative percent	Extraction Sums of Squared Loadings	Percent of Variance	Cumulative percent	Rotation Sums of Squared Loadings	Percent of Variance	Cumulative percent
	Total			Total			Total		
1	3.502	21.890	21.890	3.502	21.890	21.890	2.266	14.164	14.164
2	1.788	11.177	33.067	1.788	11.177	33.067	1.827	11.417	25.581
3	1.459	9.119	42.186	1.459	9.119	42.186	1.731	10.818	36.399
4	1.293	8.079	50.265	1.293	8.079	50.265	1.565	9.779	46.177
5	1.150	7.185	57.450	1.150	7.185	57.450	1.440	9.000	55.177
6	1.067	6.671	64.121	1.067	6.671	64.121	1.431	8.944	64.121
7	.936	5.852	69.972						
8	.750	4.687	74.659						
9	.708	4.424	79.083						
10	.631	3.946	83.029						
11	.534	3.334	86.364						
12	.533	3.333	89.696						
13	.499	3.118	92.815						
14	.440	2.753	95.568						
15	.404	2.523	98.091						
16	.306	1.909	100.000						

Extraction Method: Principal Component Analysis.

Table 5.10 Rotated Component Matrix

Variables	Component					
	1	2	3	4	5	6
Care by near and dear	.721	-2.777E-02	-8.932E-02	.208	-4.277E-02	.148
Plenty of rest and leisure	.481	-.439	6.661E-02	.430	7.652E-02	-.142
Freedom from responsibilities	.713	-.285	8.277E-02	-.113	-6.093E-02	-1.626E-02
Having lot of friends	6.844E-02	-.274	-7.838E-02	6.755E-02	-4.952E-02	.697
Ability to do work even in this age	6.048E-02	.205	-1.825E-02	1.704E-02	-8.498E-02	.816
Able to achieve life's goals	.172	-.140	6.205E-02	.588	-.274	-.189
Able to face life with equanimity	-3.411E-02	.101	-6.548E-02	.821	1.998E-02	.286
Ill-treatment from close relatives	-.153	.166	.150	-.303	.675	-.118
Indifference of close relatives	-.406	4.531E-02	.166	-.195	.612	-.168
Loss of close kins	.251	.185	.730	-.206	-7.215E-02	-.158
Declining health	-.319	4.929E-02	.163	-.315	-.636	-4.649E-02
Financial difficulties	-.592	.519	-8.423E-02	-6.980E-02	9.375E-02	-.129
Disappointment in achieving goals	-9.489E-02	.776	-1.408E-02	4.585E-02	.234	-1.072E-02
Having nothing to look forward to	-.208	.644	.325	-8.818E-02	-.145	-1.328E-02
Loneliness and isolation	-2.022E-02	7.153E-02	.774	.105	.105	-6.264E-02
There are nothing bad in life	.459	.215	-.614	-2.560E-02	-9.124E-02	-.174

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. A Rotation converged in 13 iterations.

Need assessment of elderly people

It is often ignored that healthy elderly people have less need for medical investigation as they do for reassurance, information and advice that will help them maintain and improve their health.

In the study, health care needs which includes medical, nursing and social needs were assessed. Assessment was based on the discussions with the sociologist of the team. A healthy family environment was found to be lacking in about 40 percent of the households in which the elderly is residing. Interactions with family members were also found to be poor in 40 percent of the families. One of the theories of aging disengagement theory states that there occurs mutual withdrawal between the elderly and the society. But this may be a conscious withdrawal, or might even be imposed upon the elderly person. The study finding seems to be supporting this theory. Participation in social activities is found to be lacking in about three fourth of the elderly people. This phenomenon was similar in both men and women. We have already seen from the data that having own income does have a role to play in the status and importance the elderly patient receives from the family. Financial support is found to be needed for about 40 percent of the elderly.

The social well being of person is determined first and foremost in the family. The family should have a healthy family environment with good communication and interaction between the members. Participation in social activities of an elderly person can only happen with the support of his/her family. As was shown by previous analysis, having a stable personal income seems to be the determining factor. (See table 5.11.)

Table 5.11 Percentage of persons lacking adequate social life

Need	Male	Female	All
Healthy family environment	33	39	37
Interaction with family members	42	39	40
Participation in social events	64	64	64
Financial support	28	39	35
Social security	25	41	35

Health care needs, which include nursing, and medial needs were also assessed. Majority of the elderly people studied were found to have one or other of the ailments necessitating continuous medication or urgent intervention. The ailments taken into consideration are: cardiovascular problems like myocardial infarction and hypertension;

respiratory problems like incapacitating asthma, acute respiratory infection, acute bronchitis and cancer of respiratory tract; gastrointestinal disorders like abdominal hernia, chronic peptic ulcer cancer of GIT, genitourinary problems like uterine prolapse, BPH; loco-motor problems like osteo-arthritis and rheumatic arthritis; psychiatric problems like acute confusion, obsessive psychosis and dementia.

Regular intake of medicine is very essential for those with chronic health problems such as diabetes, hypertension, and ailments of heart. In the study it was found that only around 42 percent of the elderly take medicine regularly**.** Irregularity of medicine intake was found to be higher among women. This irregularity may be lack of awareness or proper care or even indifference of the concerned person. Among those identified as having ailments nearly three-fourths are in need of an urgent detailed medical check up. For about 12 percent of persons with illness, no one was present to provide proper care. Even among those having care, in about 40 percent of the cases the care given seemed to be inadequate. Details of the needs of the elderly persons with ailments are given in table 5.12.

Table 5.12 Needs of elderly with ailments (in percent)

Type of need	Male	Female	All
Ensure regularity of medicine intake	50	61	58
Urgent medical check up needed	61	80	74
Need to have medical awareness	32	54	47
Need for caregiver	4	16	12
Proper care needed	7	46	39

Having health problems does not necessarily mean that the individual is worried. About one-third of these persons reported that they are on the whole happy and satisfied with their condition, and about one-sixth is indifferent to their problems. Only about one-third of these persons were concerned about their health in younger days. The finding that the presence of health problems are not a major concern to the elderly is a deviation from the popular belief that in old age aliments are the most important cause of worry. The real causes of worry among elderly lie in areas outside the medical concern.

VI

HEALTH CONDITION OF ELDERLY: ILLUSTRATIVE CASES

In the previous chapter the health status and socio-economic features of the elderly were discussed and an attempt was made to understand the association between the two. The relation is highly complex and depends on variety of underlying factors – social, cultural, and economic. The reaction of each individual to the same set of background often differs. We present here some illustrative cases that highlight the complex relation between the health status and socio-economic background of elderly persons. For the sake of anonymity the names have been changed.

Thampan: 67 years

Mr Thampan is a graduate and a retired schoolteacher. He lives with his wife, son, daughter-in-law, grand children and his sister in his two-storied house near the city. He is a very active man involved in social and cultural activities. Besides working as a part-time accountant, who fetches him some income he is also the editor of a locally published magazine. Though he has gifted all his property to his three children he is actively involved in its supervision. He also takes care of his elder sister who is single and living with him.

He looks very healthy and happy. He has been diagnosed as having hypertension (there is history of hypertension in his family), and it is now in good control with regular intake of medicine and proper diet. He also does regular medical check up. He walks about two to three kilometres daily and is very much health conscious. He has never smoked or taken to liquor. He is spiritually inclined and visits temple regularly.

He says he is very satisfied with his life and he attributes all his success to his disciplined life. Though he has gifted all his property, he continues as the head of the household and he has no financial difficulty by virtue of his pension and also the income from the part time job he holds. He thinks it is essential for a person to be as active as possible through out one's life and this is particularly so in one's old age. The financial independence, support the family members, disciplined life and continued activity are the main factors that keep Mr Thampan a satisfied person.

Gopalan Nair: 72 years

Mr Gopalan Nair who hails from a well to do family is a postgraduate with degrees in English literature and Psychology. He retired from government service as a Junior Superintendent. His wife was also employed and is now retied. He has three sons and a daughter, all married. He now lives with his wife, one of his sons and a grand daughter in a rented house.

Of the four children only the daughter and one of his sons are well placed financially. Most of his earnings as well as that of his wife are spent for meeting the medical expenses of his second son who is afflicted with multiple diseases. To meet his household expenditure he now runs a wholesale tea business with the help of two of his sons, but the income is very low. He also takes tuition in English to college students.

He is a chain smoker and smokes about 20 cigarettes a day. He looks very dehydrated and tired all the time. Though routine clinical examination did not reveal any disorder only a thorough medical check up can rule out any occult medical condition.

He says that he accepts life with detachment in spite of the difficulties both he and his wife had to face because of their son's ailments. And that he has no regrets for not being able to amass wealth and position in the society.

It seems that due to financial difficulties and lack of support from his other children he is indifferent to his health and medical needs. He might have comes to terms with the way he has to deal with life.

Aysha: 65 years

Aysha lives on the banks of a sewage canal near in a slum like place. The dwelling is basically a one roomed mud structure with a partition in the middle. The roof is made of asbestos sheet and coconut leaves. The house has no toilet facility and for potable water she depends on the public tap. Like most of other households in the locality this family also belongs to Muslim community.

Her husband died when she was 25 years old. She bore four children, a daughter and three sons. She now lives with her only daughter and two grandsons. None of her sons visit her or extent any kind of support, financial or otherwise. The family is wholly dependent on the wage earnings of her two grandsons. Aysha goes begging often to

meet her personal expense which is mainly to buy beedies which she smokes about 20 to 30 per day.

She is suffering from chronic cough and abdominal pain, both of which can be attributed to her smoking. Physical examination revealed abdominal hernia (protrusion of contents of abdomen through a weak part of the abdominal muscle- which might be the result of chronic cough she is suffering from and also from mal-nourishment and consequent atrophied muscle) and chronic bronchitis. Blood investigation revealed anaemia. She depends on the primary health centre in the locality for her medical problems; but all she gets are a few vitamin tablets, most of the time. She looks very ill, dehydrated and malnourished. She doesn't take proper food, because of the non-availability of food in the house and decreased appetite and gastritis she is suffering from. Though clinical examination revealed only abdominal hernia and bronchitis, a detailed examination might reveal more medical problems. But this she is not able to avail of because of her poverty and lack of support from her sons. The PHC also did not care to do any detailed examination.

Sankaran: 76 years

Sankaran is a very ill looking man with a constantly worried look in his face. He lives in a tiled congested house (which is about 400-500 sq.ft), with a family of eleven consisting of his wife, two sons, and two daughter-in-laws along with 5 grand children.

He is a chain smoker, and used to drink moderately when he was young. He has studied up to 7th standard. Through out his life he had under taken several jobs, of which the main one was as a cook in a local hotel, and this was the job he held last. After leaving this job he used to supervise cooking in wedding ceremonies. But of late he is not been called upon for any of such activities. The little property he had, had been partitioned and given to his 6 children including the son with whom he now lives. Now he has absolutely no assets or any income.

In his younger days he used to be an active participant in social, cultural and political activities. But now he is very much depressed because of his inability to participate on account of his fast deteriorating health. Though his sons do take care of him and his wife, he is reluctant to ask for their help, as he believes that the scarce resource, which the earning members bring home, should rightfully be used for the needs of the children in the house.

He is suffering from multiple disorders, two of which have almost made him homebound. His vision has been decreased profoundly and he is almost deaf in the right ear. He has no money to get himself checked up and treated. He gives history suggestive of night blindness (which is decreased vision in the night) since the past few years. He also gives history of chronic bronchitis, which he knows is due to his chain smoking. Another problem he is suffering from is rectal prolapse (where the lower portion of the rectum comes out of the anus especially during straining) due to chronic cough which in turn is due to bronchitis. The family however is not aware of this.

He puts all the blame for his ill health on financial dependence, which he believes has striped him of the dignity of a human being. Since he has earning sons he is not eligible for any kind of pension. He says he is willing to work even at this age but is frustrated at the non-availability of suitable job.

Balamma: 75 years

Balamma bore 10 children, all of who are alive and have their own family. She now lives in her own house with her youngest son, daughter-in-law and two grand sons. She has schooling up to 8th standard, by virtue of which she could work as a teacher in a government school. But after her marriage she had to resign the job to become a full-fledged housewife, her husband being a landlord. According to her daughter-in-law, till about 7 years back she controlled the whole family.

Her husband died 6years ago. Roughly around this time she developed some eye problem and in another year her vision began to deteriorate steadily till she was completely blind in both eyes. This was a huge blow to her morale. Her arthritic problem, which was mild earlier, got worse during this time and in a matter of two years she became completely bed ridden. Now, 6 years after she lost her eyesight she is just a living shadow of her previous self. Both hands and legs grossly deformed, hands flexed at elbow, clasped to chest, legs flexed at knee clasped to chest, she is bedridden and needs help to move from the lying position. She says her children some times visit her. But all these years no one has taken any interest in getting her treated even during the early stage of arthritis. Her communication with family members is now at a very low level.

To cope with her disability, she has made some adjustments like taking bare minimum food and water, just enough to sustain life. She made these adjustments especially to

decrease frequency of urination. She passes motion only once in a week. Now she is only skin and bones, and it seems that her body metabolism has made appropriate adjustments by slowing down so that only bare minimum food is needed. She insists on having her bed in the veranda, so she could hear what is happening around her. She is a very knowledgeable person and talks with ambience. Her memory both recent and past is clear. Severe depression is echoed in every word she speaks.

Meenakshi: 70 years

Meenkshi is a manual labourer. She lives with her disabled husband in a small two-roomed hut. She has to finish her household chores early in the morning before leaving for work to provide for herself and her disabled husband. All her five children are married off and two of her daughters live nearby. She is illiterate and does a variety of jobs for living. She is conscious of her responsibilities towards her ailing husband. Since she has to work to both ends meet she tries to maintain good health. She has hypertension but controls it by regular check up in a private hospital and takes medicine with out fail. Having gone through many tragedies during her lifetime she faces problems bravely. She believes earning her bread herself gives her dignity that she believes is necessary in everybody's lives.

Ponnamma: 67 years

Ponnamma lives alone in her own house. She doesn't maintain good relation with her husband who lives separately with one of their daughters. She has two daughters both married off. She studied up to 5th standard. She had a job in a weaving company where she worked for 30 years. After retirement she continued to work in the company for lesser wage. For the past one year she is troubled by constant fatigue and decreased appetite that forced her to leave the job. Her income now is limited to the small pension of Rs. 300 per month she gets from the company. She had two episodes of bleeding for which she sought medical consultation with a Gynaecologist two or three times, but was sent back with some medicines. When enquired about her health, her complaints were about the constant fatigue and tiredness, but no mention was made of the bleeding. But history taking (detailed discussion about the patients medical problem which include past and present problems) revealed of her bleeding episodes and subsequent clinical examination suggested malignancy, possibly connected with uterus. The researcher referred her to the SAT hospital where cervical cancer (a part of uterus)

was confirmed. But unfortunately the condition had become advanced with local as well as distant spread of cancer in her body. Cervical cancer is one of the completely curable cancers, if detected early. Warning signs like bleeding after menopause is strongly suggestive of cancer of uterus. Proper medical history taking alone is sufficient to arouse suspicion of a medical professional. This has not happened in her case. The sad part of the case is that barely three months after confirmation of the illness she passed away. In this case negligence on the part of medical pr ofession coupled with lack of awareness on the part of the patient as well as the family has resulted in untimely death.

Bargaviamma: 75 years

Bargaviamma is a widow and lives with her married daughter, son-in-law and two grand children. She has 6 children two sons and four daughters all married. Two of her daughters live very near. She has inherited a lot of ancestral property but has gifted all, mostly to her daughters according to the tradition. She now feels guilty in not giving fair share to her sons. Having gifted all the property now she has absolutely no income. All her personal needs including medical expenses are borne by the daughter with whom she stays.

Her main complaint is impaired mobility because of severe back pain and knee joint pain for which she is taking allopathic medicine. She has also tried other systems of medicine but with out success. Her movement is so restricted that even inside the house she has severe difficulty in movement. To add to the misery she is troubled with asthma, which in turn is aggravated by most of the drugs used in treating arthritis. She also complains of burning sense of pain all over her body. The one problem she is hesitant to reveal even to the doctor she consults regularly is uterine prolapse (a condition where in uterus protrudes outside the vagina; this is a condition requiring urgent surgical correction). An interesting thing about this condition is that the condition itself causes back pain. Thus the root cause of her immediate problem of impaired mobility can most probably be the uterine prolapse, which unfortunately is left untreated. Her daughter is aware of this condition, but is hesitant to seek medical intervention, which requires hospitalisation. The justification given by the daughter for not taking this step is that her other siblings who have an equal responsibility in taking care of their mother are not coming forward and why she alone should shoulder the entire burden. The real problem is financial. Examination also revealed that her blood

pressure is high. The burning sensation all over the body may be due to peripheral neuritis.

She is depressed both on account of deteriorating health and family conflicts among her children. She spends her time by watching TV and sleeping. She doesn't participate in religious ceremonies, social functions or any recreational activities. Her contact with even the family members is at a very low level.

VII
DISCUSSION

The World Health Organization defines the goals of geriatric care as "to keep the elderly in good health and happiness in their own houses for as long as possible." This can be achieved only by maximizing their independence, by minimizing losses of bodily functions especially that of mobility, increasing social support, promoting subjective well being and preventing premature death and disabilities. The real shock of growing old is not that it happens, but that it occurs before most people are ready for it

From birth to death, human body is under the influence of different internal and external environments. The affiliation of Medical research studies done all over the world can be seen to be towards childhood diseases and diseases pertaining to young adult males. The variations and the atypical presentations among elderly are conveniently classified as "idiopathic". Recently an upsurge in elderly studies is seen but even these studies are mostly skewed in terms of selection of the sample, which is comprised mostly of elderly people residing in institutions and hospital settings and the results are generalised.

In clinical practice, in the case of elderly people, most of the diseases go unreported. What the physician in clinical setting comes across is only the tip of the iceberg of morbidity. The submerged portion comprises of "unknown" conditions of loco-motor problems, malnutrition, anaemia, visual and hearing defects, urinary tract infections, dementia, depression and other mental illness.

Late presentation of elderly people in clinics may be due to varied reasons like lack of resource, lack of finance, lack of family/social support, indifference of caregiver, ignorance about disease, resignation to situation etc. This study attempts a peep behind the screen of increasing morbidity among elderly people in Kerala to understand the real situation and the factors leading to it. The scenario portrayed generally about the elderly like degraded living conditions, declining health, meagre income compounded by out casting by the society etc have been explored. An attempt has also been made to study the attitude of elderly towards life.

The study was conducted in two suburban hamlets where a mix of middle class population consisting of service pensioners, farmers, traders and manual labourers live. A random sample of 120 elderly persons was selected from these areas and their health

conditions, health needs and the socio- economic milieu in which they live were studied. The study team consisted of a physician as the chief investigator, a sociologist and a paramedical person. The presence of the medical practitioner in the team, it is believed has facilitated open interaction with the elderly persons. Of the three to four visits made in each household of the selected elderly people, the first visit was used for medical examination, which also leads to creating a rapport with both the elderly person and the family members. The second and third visits were used for sociological enquiry, laboratory investigation and medical advice. There was a certain amount of non-response since some of the elderly men in the selected sample were not available during the team's visit. In a few cases there was non-cooperation also, particularly for clinical examination. As a result, the final sample could cover only hundred elderly persons, in which there were more women than men.

In the social set up of India as well as prevailing in Kerala, elderly people usually live with their children (Dandekar, 1996 Tandon, 2001). Most of the participants of the present study were found to be living either with their spouse or their children. This is in contrast with the situation in western countries where the proportion of elderly living alone is much more. Studies have also shown that the proportion of disabled elderly living alone or in institutions sharply increase with advancing age and female sex (Melzer et al, 1999). A similar scenario is fast emerging in Kerala as a result of changes in social set up like migration abroad of the young seeking job. It should be remembered that Kerala is a state with the highest number of old age homes in the country.

"Old age is the time for rest and leisure, and children are responsible for taking care of them" - this age-old saga seems to be lingering on in this 21st century. Many of the elderly people covered in the study voiced this opinion. Interestingly these people turn out to be those who either do not work or involved in household activities only. Only about 10 % elderly people are engaged in any gainful activities and these are manly men. Others, especially women are engaged in household activities or looking after children forming the invisible work force, as social scientists call them. The activity pattern of elderly women in many parts of the world is more or less the same (Simonsick et al, 1995).

Educational status was repeatedly shown by many studies as an important determinant of the well being of an individual. In a study done to establish the relative

contributions of incidence, recovery rates, and death from impaired mobility it was found that educational status was significantly associated with both recovery and risks of death (Melzer et al, 2001). The present study highlights a positive aspect very particular to Kerala - the priority given to education from very early days. In contrast to the national level educational status where nearly 90 percent of elderly women and two third of the elderly men were illiterate, among the participants of this study only one third of elderly women and one tenth of elderly men were illiterate. About three fourth of the men and half of women had educational level secondary and above. Education was also shown to be directly related to better health and better awareness about health. These peoples and are the ones who are regular in their medicine intake and medical check up. The educated also showed a keen interest in being independent. One of the study participants who was the editor of a local magazine, do physical exercises regularly and was very active in social affairs. Another person though 70 years old teaches mathematics to degree students and also manages the family business. He says teaching gives him pleasure and also some extra money. Education also gives a person zest for working. Most of elderly persons who showed willingness to work were the better educated.

In this modern era where technological skills are valued above every thing else, knowledge of traditional skills handed down from generation to generation is loosing its value. One of the theories of ageing, the role theory, states that a society is organized around work ethic. Because material concerns such as food and housing must receive priority for many of the elderly, reduction of income means a reduction in social activities. Many elderly persons withdraw from participation in social engagement because they believe that they cannot participate adequately without being financially contributing members. The loss of a gainful work or productive work may result in loss of respect in the society/family. However, this is a matter of scepticism. Some of the results of the study point to the loss of status of persons with reduction in income.

About 43 percent of the elderly persons head the family in which they live and most of them are men. It was observed that consultation on important household matters is to some extent associated with the financial independence of the elderly member. But, this cannot be generalized. We have come across cases where the advice of the elderly members is sought even though their income is inadequate. Provision of sleeping arrangement to the elderly can be taken as a good indicator of the status the person

enjoys in the family. The survey results indicate that elderly people with adequate income enjoy either good or satisfactory sleeping arrangement whereas some persons with inadequate income and most people with no income have unsuitable sleeping arrangement. This indicates that the financial position of the elderly person to a large extent influences his/her status in the household. Among the participants there was an elderly lady living in a very good concrete house with her son who is a well-placed government servant enjoying high socio-economic status. The lady has impaired physical mobility due to very poor eyesight and osteo-arthritis of both knee joints. To our great surprise we found that she sleeps on a platform made by placing together two benches. The exact reasons for neglect and loss of status in the family are difficult to establish.

Health condition as perceived by the doctor

Health status of elderly people was assessed through history taking, clinical examination and basic blood investigations. The over all impression is that with advancement of age disability increases and that morbidity is higher among elderly females. Many studies done all over the world has also the same conclusion. The MRCCF study done in England and Wales found that 11 percent of elderly men over the age 65 and 19 percent of elderly women were disabled (Melzer & et al, 1999). Both morbidity and mortality stems from chronic diseases. In the study done in a state in India by Vijayakumar, about 53 percent of elderly people are found to be suffering from some type of chronic diseases. Loco-motor system affliction especially arthritis, is the commonest disorder found among elderly. Diseases affecting the heart and blood vessels, that is cardiovascular disorders and peripheral vascular disorders rank next. Endocrine disorders, disorders of the gastro intestinal system and respiratory system disorders are also noticed in a large number of elderly people (Vijayakumar S, 1996).

Arthritis, though one of the commonest afflictions the elderly persons have to face is also the most ignored and unattended. About half of the elderly persons of the study group have this disorder. The causative factors are poorly understood and the allopathic treatment available so far is symptomatic only. Of the many types of arthritis, osteo-arthritis is the commonest and it affects the large joints of the body like the knee joint. Women are more prone to this disorder. In the present study, the percentage of women having this disorder was found to be double that of men. May be the sedentary life style

and house bound activities that elderly women are involved in, in may be contributing factors.

Hypertension, the commonest vascular disorder, was found in about one-fourth of the study group. There is scientific evidence that most of the vascular disorders are lifestyle associated – stress, sedentary lifestyle, obesity, diet containing lots of saturated fatty acids and smoking, to name a few. The role of the protective hormone estrogen in women against cardiovascular problems is a well-documented fact; hence after the age of menopause the chance of this affliction is more or less same for women as for men. However in the study the prevalence of hypertension was found to be more among elderly females than among elderly males. Since blood pressure was checked three times on three different occasions in order to ensure accuracy this finding cannot be attributed to observational error. It is possible that the sedentary life style followed by the elderly women in our country is one of the reasons for the higher prevalence rate. Declining social and physical activity and unhealthy diet habits, which are in fact a continuation of what they were practicing from middle age onwards, increases the speed of acquiring this disorder. Among the chronic diseases, cardiovascular problems have received the maximum attention world over. This is reflected in the fact that the disorders of this system are reported quiet often to the health care facility. Advances both in diagnosis and treatment and media publicity have lead to even over reporting of the symptoms pertaining to this system. The availability of diagnostic facility and the fear of "heart attack" might be the reasons why people seek consultation on cardiovascular problem at the earliest. In this connection it may be recalled that in the studies carried out in Trivandrum by Vijaya Kumar K et al and the Gerontological Society of Kerala (Nayar, 1999, Vijaya Kumar K, 2000) the prevalence of hypertension was found to be only 18 and 12 percent respectively. These studies were carried out by questionnaire method while in the present study the disorder was identified through medical check up. In the study done by Hypertension Study Group through clinical measurements the percentage of people with hypertension was estimated as 69 percent in urban sites and 55 percent in rural sites (Iftekhar et al, 2001). These findings indicate the extent of undetected cases of hypertension among the elderly population.

Peripheral Vascular Disorders (PVD) was also found to be equally prevalent among the elderly. This is also one of the most under reported and under diagnosed. The main symptom of this disorder is pain while walking, a symptom believed to be a feature of

old age. Another very common disorder arthritis also presents as pain in the lower limps. There are sophisticated investigations for the diagnosis of PVD and measurement of its severity, but to a large extent the diagnosis can be done based on typical clinical history. While 36 persons in the sample showed clinical evidence of peripheral vascular disorder, only one person was undergoing treatment for this disorder. This points out to the extent to which this type of disorder is uncared for by the family and the society. Unfortunately the medical professionals also usually ignore this disability.

One of the commonest complaints that the elderly people make about the alimentary system is gastritis characterized by abdominal discomfort and heartburn. But constipation, which is even more common, is accepted and not complained of as it is considered as part of slowing down of internal process, again an inevitable process in aging. Even medical practitioners brush off the complaint of constipation of three to four days as transitory. But irregular bowel movement can happen as a result of disruptions in the function of the stomach/intestine, which may be due to low fibre diet and reduced intake of fluids or as a side effect of certain drugs. Also, constipation may be a pointer to certain cancers in the intestine and hence need to be taken seriously. An unreported disorder found in this study was found to be abdominal hernia. Even though only a few elderly women were found to be afflicted with this disorder, none of them were seen to have been diagnosed. These women belong to the lower socio economic stratum and they depend on the Primary health care centre for their health needs. Even though they visit the centre for minor ailments, this disorder the common symptoms of which are indigestion and constipation has not been looked into.

The common disorders afflicting the respiratory system found in the study were chronic bronchitis and asthma. Since tuberculosis of the respiratory system is very prevalent, in some cases it is possible that cough, which is one of the common symptoms of disorder of respiratory system may be due to tuberculosis; but this goes undetected. The hidden cases of tuberculosis warrant proper investigation. Of the one fifth suffering from respiratory problems few had undergone proper investigation. Chronic cough may also be a symptom of malignancy of the respiratory system.

May be because of the nature of presentation, diseases pertaining to genitalia, urinary tract and reproductive tract are also usually unreported. The urinary tract infection was detected in 6 percent of the elderly through urine testing and all such patients were

women. None of these cases were detected earlier. All of them live in very close proximity to medical centres both government and private. So, non-detection of this problem points to ignorance and lack of awareness on the part of the elderly and also carelessness on the part of medical practitioners. Atypical presentation without pain and the common symptom of fever might also be the reason why the doctor failed to elicit history of illness from the person. An elderly lady with a very obvious disorder of prolapsed uterus has gone unnoticed by her doctor whom she consults regularly. But at the same time she is on regular medication for backache, which is a common symptom of prolapse uterus. This elderly lady also suffers from difficulty in breathing. The painkillers that she is on for more than five years are notorious for aggravating difficulty in breathing. This lady belongs to a well to do family and has three of her daughters living in close vicinity. On talking with the daughter with whom she lives it was found that, none of the daughters were ready to spend time as bystander for treatment in hospital. This lady who once was a landlord has gifted all her property to her children and is now totally dependent on her children for all her needs.

Recent studies highlight the high prevalence of diabetes an endocrine disorder, in Kerala. The study done by the Gerontological Society in Kerala has found the prevalence of diabetes among elderly as 12 percent. In the present study, about 16 percent of the elderly were found to have been afflicted with this disorder. As in the case of hypertension, this is also one of the disorders, which have received much public attention. All those detected as having high blood sugar were under treatment. However there is irregularity in checking blood sugar, and also there is some misconceptions regarding the intake of the 'anti sugar treatment' like, adjusting dosage according to the amount of food intake. The awareness that possible complications like kidney failure and neurological disorders can be avoided by regular checking of blood sugar and maintenance of a fairly constant blood sugar level is lacking. Disorders of thyroid gland are another endocrine problem which is missed by the medical practitioner. Since it presents very vaguely with symptoms like poor appetite, fatigue, cold intolerance, mental deterioration it is easily misattributed to old age. The clinician should be vigilant when encountered with disorders like certain neuropathies, depression, altered behaviour and cognitive impairment in elderly, as these are also attributable to thyroid dysfunction. A definitive diagnosis should be arrived only on the basis of detailed investigations. But considering the tremendous improvement it can make on the quality

of life in those afflicted, the physician should not hesitate to investigate and start treatment. Hyperthyroidism characterised by increased production of thyroid hormone is less common. Physician should remember about this disorder when dealing with weakness, breathlessness, anxiety, weight loss, dementia, confusion and depression and some of the heart problems all of which are more frequently seen in elderly patients with hyperthyroidism (Khairia et al., 1999).

The control of mind over body is a comparatively new subject of interest in scientific field and new researches are coming up. Traditional Indian meditations and yoga are witnessing an upheaval. The common forms of mental disorders found in elderly persons were depression and dementia. For proper diagnosis of mental problems a specialist in this field is required. In the present study we used Hamilton's depression scale for the detection of depression. About half of the elderly persons were found to be having varying degrees of depression. Recent studies highlight the two-way association between depression and organic disorders of the body. Among other factors incurable or chronic diseases, immobility, functional disabilities like visual and hearing defects etc also can lead to depressed conditions. In a study on depressive symptoms and risk of functional decline it was found that "an increasing number of depressive symptoms is a negative prognostic factor for patients with heart failure, just as it is for patients with heart diseases".

The family and the health system alike seem to be less vigilant about mental illness compared to physical illness. Generally the family members and the society are not prepared to accept certain mental disorders as disease at all. Four persons in the study group were found to show clear symptoms of dementia, but none of them were accepted as having the disease by the family. Memory loss and forgetfulness are often treated alike. When a young person forgets to buy all things in the list from a grocery shop it is often referred to as forgetfulness; but when an old person forgets, it's often said to be due to memory loss. This contradictory thoughts need refinement.

About one-third of the elderly persons in the sample suffer from moderate to severe visual defect. Most of these persons with moderate defect and none with severe defect have received any kind of treatment. Even though modern medicine offers effective means to treat the five major causes of visual disability among elders – uncorrected refractive error, cataract, glaucoma, diabetic retinopathy, and macular degeneration, elderly person and the society alike fail to acknowledge it and medical practitioners fail

to convey the message of goodwill. An elderly person with moderate to severe visual defect due to cataract can walk away with near normal vision in twenty-four hours. Appropriate treatment for visual problems in elderly can significantly reduce the overall prevalence of visual disability and improve the quality of life for a large proportion of vulnerable elderly patients (Kanski, 1987). Similarly in the case of hearing loss only very severe forms of defect have come to the attention of health care system as well as the family.

In a community based study done to determine the relationships between visual and hearing impairment to subsequent functional dependence and mortality, it was found out that people younger than age 80 years who see well are also more likely to perceive their health as better than those with declined vision (Wang, 2000). Attributable risk of hip fracture due to poor visual acuity or stereopsis (depth perception) was found to be higher at 40 percent (Ivers, 2000).

Physical mobility, the capability of movement is necessary for the health and well being of all persons, but is especially important in older adults because a variety of factors impinge upon the mobility with aging (Barker and Bury, 1978). Impairment in mobility often gets imposed due to medical problems directly related to muscular, skeletal or neurological systems and limits the patient's ability to move about. Indirectly defective vision, hearing and general weakness which are usually considered as part of aging process, sedentary lifestyle, and diseases requiring bed rest depending on the severity make the individual functionally impaired, restricting his ability to carry out the activities of daily living (Tinetti et al, 1995). It was noticed that in many of the well to do families the elderly women with vision problem refused to discuss on this topic in the presence of their caretakers. Elderly women who do not have access to medical facility by way of money and / family support keep this very disturbing problem to themselves.

It was seen that those with impaired mobility feel their health deteriorated to a large extend. In the study group for about one-fifth of the elderly persons mobility is restricted inside the house, this includes a few who are bed ridden. Another fifty percent can go out but should have some help for movement. One of the consequences of impaired mobility on the person's psychological well-being is the effect on self-respect and self-esteem. Only a few persons with impaired mobility have reported the problem per se to health care facility. In a study carried out at a mobility assessment

clinic in Singapore, it was found that only two third of the patents with impaired mobility report the problem and for the remaining impaired mobility was an incidental finding (Tan et al, 2001). This points out to the urgent need for health care delivery system to take a cue and find out the causes that restrict mobility and suggest remedial solutions. Declining vision and hearing are often over looked as a cause of impaired mobility. Control of disorders like diabetes, hypertension and hyper cholestrolemia can result in remarkable recovery of vision and also improve blood circulation to the legs there by improving mobility.

Elderly persons who come to live with their children often face restrictions in their movements and contact. When other members of the family go out these elderly are made to sit alone behind the closed or even locked homes. Also they are not allowed to mix freely with neighbours. Among the participants we came across a person with severe mobility problem, for whom a room was given in the first floor. Because of the difficulty in climbing down stairs, this gentle man always remains in the room. He is diabetic and suffers from peripheral vascular disorder for which the main line of treatment involves walking and being active all the time. He is a widower, has no children and lives with his brother's son. He is financially well off besides having property on own he has regular source of income. Here we see the lack of social awareness on the part of the family. For fear of mishap they are not encouraging this person to move about. He is even provided with a television in his room upstairs. This example of the present day conception of the society, which regard caring as synonymous with confinement. Little research was done in determining the influence of social circle on the elderly person's life.

Old age is often viewed as a time of loss- loss of health, loss of wealth, loss of status and independence, leading to depression, malnutrition and poverty. This depressing picture is presented by most of the study participants. Around 60 percent elderly agreed that they were indifferent towards their health during younger years and about 70 percent perceived their health to be fast deteriorating. An interesting finding was that only about half of the elderly were worried in their attitude towards life. Analysis showed that there is no significant relation between deterioration of health and attitude towards life. Those who think that their health has not much deteriorated are those engaged in farming related activities or those with salaried employment. For elderly

people engaged in casual labour or in household chores deterioration in health is keenly felt.

Family serves a variety of functions on individuals of all ages. Families are the context in which values are socialized, a sense of personal lineage is created and powerful individual developmental tasks are accomplished. The interaction is usually mutual between the older adult and others in the family. Elderly people are more vulnerable to the ripping effects of major life events like death, divorce, marriages, retirement, illness, injury, misfortunes etc, which alter the way in which the older person's needs are met. The joint family system prevalent in Kerala a few decades ago ensured care and support to the elderly and in return provided the benefit of wisdom and advice to the younger members. Though the nuclear family as an alternative arrangement has set foot in Kerala, most of the elderly people still live with their children. In the study we found that for most of the elderly men the caregiver was their spouse, but for women, the caregiver was either their children or spouses of their children. It should also be noted that typically only in the last few years of the life span do aging individuals need close assistance from family members. Actually during the greater part of elderly years the older adults do provide significant amount of services as care givers themselves to younger children and domestic chores. The study shows that not all elderly who actually need care and have caregivers maintain good relation with their caregivers. While almost all of those who are happy about their life in general have good relation with their caregiver, an equal proportion of those who are worried about their life in general also usually maintain a good relation with their caregivers. This may be an indication that a wide social circle beyond the confines of home influences the attitude of the elderly person towards life.

VIII
SUMMARY AND CONCLUSION

Needs of elderly

In spite of the fact that the aged population is a mix of individuals having varied characteristics like income, intelligence, role in the family, physical conditions, social behaviour etc. some stereotypes of the aged are held by the general public and professionals. One of this is the perception that elderly people are sick and infirm and are dependent on others in the family. But the reality is that in spite of the presence of one or more ailments, majority of the elderly are able to carry out their normal activities without assistance. Another common misconception is that the elderly likes to disengage from the society and do not want to mingle with others.

However there are a number of social tendencies that reduces the status of elderly persons in the community which in turn influence their health status. While it is true that the inadequacy of income is related to a more abstract concept of style of living, attitude, values, expectation and behaviour of the elderly, that may or may not coincide with actual financial resources, never the less loss of income does reduce the individuals self esteem and participation in social activities. Other factors like impaired mobility, bereavement of close kin etc. also results in reduced interaction with others and adds to the loss of role and status. In the absence of individual's resources to cope with such situations, the sense of isolation can produce stress and gradually this can lead to illness. Thus, what await the physician in the community are not only the problems related to illness but also that of the community situation. So the physician need to know more about the society in which the patient resides and how various factors affect the well being of the aged in the community. In this the family can be the most important ally and effective resource of the physician in developing treatment programmes for the elderly patients.

About eighty five percent of the elderly people studied were found to have one or other of the ailments. In many cases multiple pathologies were seen as was shown in many studies conducted among the elderly people (Vijay Kumar, 1996). For 14 percent of the elderly men and 40 percent of elderly women medicine intake was irregular. Among those identified as having ailments nearly three-fourth are in need of urgent detailed medical check up. For about 12 percent of persons with illness there was no caregiver.

Even among those having caregiver, care giving did not seem to be adequate. Participation in social activities is found to be lacking in about three fourth of the elderly people. This phenomenon was similar in both men and women.

What can be done in the present set up?

The role of a person is determined first and foremost in the family. The family should not only encourage good communication and interaction between the members but also encourage the elderly person in participation in social activities. Unfortunately these factors are found to be lacking in most of the families we visited. In case of training health professionals the present emphasis is on detection, investigation, treatment, and prevention of diseases, which is justified in case of other sections of population. But in case of elderly persons, informal network of support like the family provides valuable information by virtue of long history of contact with the elderly. " Though less skilled than a formal network, it has the great advantage of being available at all times, of being able to deal with unexpected events and emergencies, and of being flexible and continuous". This network may be strengthened by utilizing available resources like NGOs and Social Welfare Groups, in creation of awareness among family members. Message imparted should stress upon the fact that caring is not confining the individual in the house. Local Self Governments may be associated with Kudumbasree groups and educational campaigns can be conducted with out much effort.

Having own income even if it is small seems to have a role in determining the status and importance the elderly person receives from the family; but we found that many elderly do not have this. The higher satisfaction expressed by those who are still working or have some income could be related to this economic effect. The morale of aged who was living in the better economic condition is found to be more or less similar regardless of their health status. Therefore provision of adequate financial support to elderly people in the lower socio economic stratum by way of appropriate social security schemes is very necessary.

Though caregiver is present in majority of the cases, the quality of care giving is not found to be adequate in the case of a large number of elderly. This often leads to a strained relationship between the elderly person and the caregiver. In situations in which the elderly person is very much disabled, tolerance of the caregiver wane as time passes by; be it the spouse, children or close kin. In such a situation the service of a

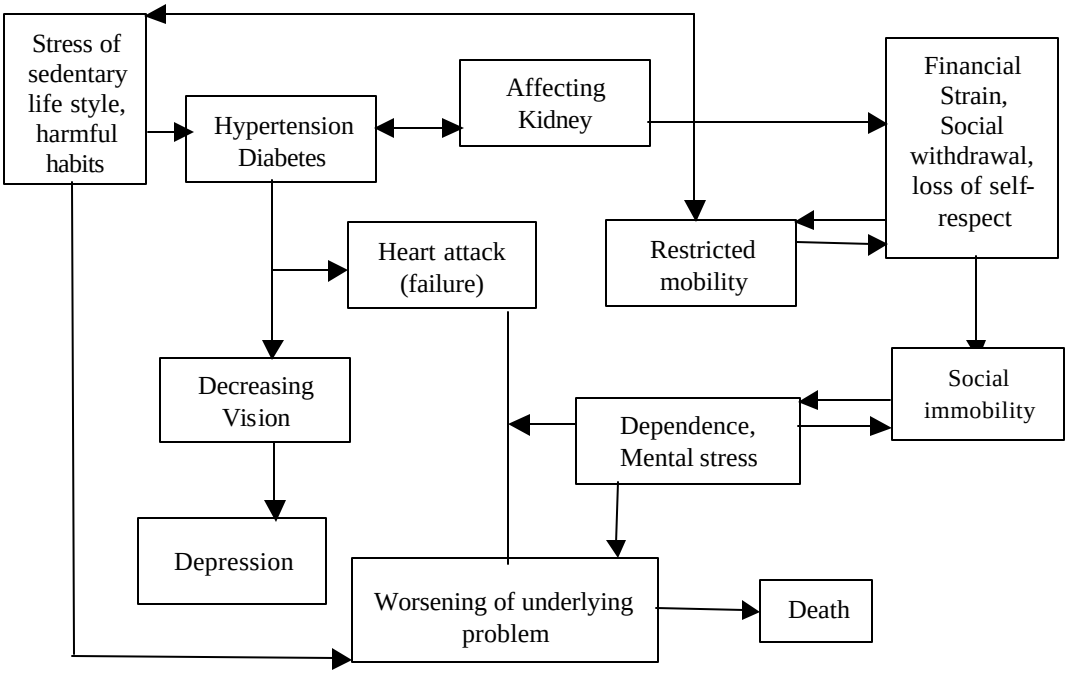
trained personnel will provide relief (e.g. for a brief period of a few hours per day, or a particular day in a week) for the caregiver/family member. The care can be offered in the home, through a day care program or in a facility as the situation warrants. Meals on wheels are a program widely prevalent in western countries. The disabled individuals who are living alone are provided food by various organizations. A modified version of this system may be adopted in our state. The importance of such a set up will be invaluable in urban areas where primary health care facility under government is not functional.

A physician's approach to the case of elderly should be with an informed, comprehensive and balanced perspective about ageing itself and about the diseases and disabilities that commonly occur in older people. While handling cases of elderly persons it is important that the physician bears in mind the following points:

Early detection of ailments: This helps to prevent complications and lessen financial burden of the elderly person. This can be explained by a simple example. It is in the mid forties and fifties of life that hypertension and diabetes usually manifest. Physical ailments, mental stress, sedentary lifestyle, habits like smoking, unhealthy diet and sedentary life style can all lead to ailments like heart disease and diabetes.

Figure 8.1

Consequence of late diagnosis of ailments



In the absence of early detection, timely medical check up and treatment the person can develop complications like heart attack, kidney failure and also slip into the terminal stage of these ailments. Also bed rest which is an indispensable component restricting mobility entail financial dependence due to costly medical treatment. In many instances depression and further worsening of the underlying problem is the end result. (See figure 8.1)

Detecting under the lying causes of ailments: The amount of time a very busy general physician spends with the patient is a matter of conjecture. Atypical presentation and multi-system diseases in elderly makes treatment more difficult. It is easy to assume that every thing about elderly is familiar when they have been regular patients for a long time. But the fact is that insidious onset of additional disorders can easily be overlooked. Making a definite plan for treatment is therefore of utmost importance. Hippocrate's dictum "he will manage the case best who has foreseen what is to happen from the present state of affairs," sounds too true when managing an elderly person. Screening and careful history taking including menstrual history in the case of women helps a lot. Anaemia can be a symptom of many disorders most of which are easily detectable.

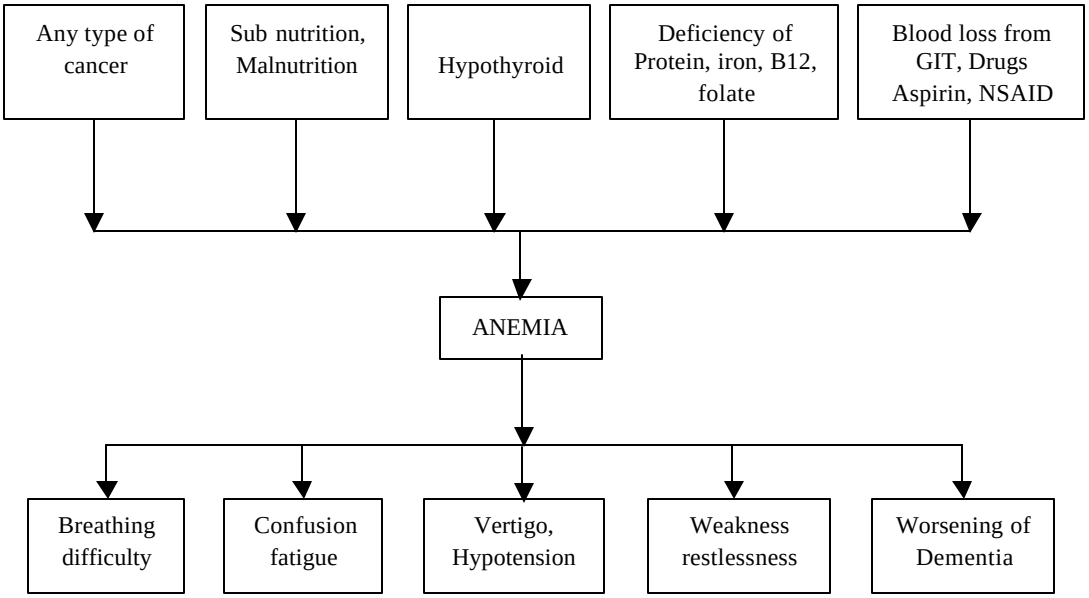
Figure 8.2 shows the many causes of anaemia and the complications that can follow if anaemia is not tackled in time. The correctable causes of anaemia are (i) dietary deficiency of iron (rich sources are green leafy vegetables and raggi), deficiency of vitamin B-complex and folic acid (fruits) dietary deficiency of protein (pulses fish, egg, meat, fish), (ii) hypothyroidism which is caused by deficiency of a hormone which can be replenished easily, (iii) and certain drugs that lead to invisible loss of blood from gastrointestinal tract. Cancers are more prevalent among the elderly than the rest of the population. Cancer of cervix, a part of uterus is one of the commonest cancers in elderly women. Fatigue, constant tiredness, vertigo, pallor, restlessness are some of the initial manifestation. Doctor may dispose of the patient complaining of difficulty in breathing with a bronco- dilator to ease breathing while actually the patient may be suffering from anaemia which is a sigh of cancer. Anaemia can also worsen any illness the person is suffering from like dementia.

Follow up of treatment: Checking on side effects of drugs, keeping a check on steroid prescription which in any form can cause alteration in bone mass density and increase risk of fracture and adjusting or changing medication to suit the conditions of the

person is very important in geriatric cases. The Horder's dictum "The most important thing is diagnosis, the next important thing is diagnosis…" doesn't suite the situation in treating an older person, as some times prognosis is more important than diagnosis.

Figure 8.2

Significance of proper and timely investigation – example anemia



Preventing falls: Falls are a major source of morbidity and mortality for older persons. The occurrence of falls in older persons is the result of a complex interaction of personal and environmental factors. Hence the intervention strategies to prevent falls have to focus on the person as well as on the environmental causes. Physician can identify elderly patients at high risk of falling and warn and advice the patient as well as the family on measures to be taken for prevention.

Half of the patients who come to the physician in a primary health care facility are elderly patients with complaints of backache, impaired mobility and indigestion. Another one-third comes to the clinic to check blood pressure. The physician burdened by an over crowded outpatient clinic, and lack of skill in dealing with Geriatric patients always tries to dispose of these grey heads with an ounce of carmicide, some analgesics or steroid tablets. Backache may be due to prolapsed uterus or due to asymptomatic urinary tract infection or most often a manifestation of depression. Indigestion and decreased appetite may be a forerunner of peptic ulcer or even malignancy. Pain while walking may prove to be due to vascular disorder of legs. Patients with uterine prolapse gets disposed off with analgesics; cancer patients might get at the most a few iron tablets for anaemia; a TB patient presenting with chronic cough or difficulty in breathing may get shots of bronco-dilator injections; someone with vascular deficiency of the lower limbs get analgesics. These are instances if investigated can be filed as serious cases of gross medical negligence. The major consumers of steroids, which is a wonder drug that alleviates symptoms of cold and cancer alike are people above the age 50 years; and this is the period when the collective effects of smoking, alcoholism and sedentary life style add up and begin to show. In the case of women major hormonal changes happen making her vulnerable to many disorders from which she is hitherto protected.

Focused investment in education and health infrastructure in Kerala during the last five decades has created the much talked about “Kerala Model of Health at Low Cost”. The concept of health care at the doorsteps incorporating simple and cost effective measures through Primary Health Center is the key factor which brought about these changes. As years rolled by the system has deviated from its initial vision and goals. Curative service, which was originally meant as a subsidiary service, is the only service now available in most of the primary health centres under this system; and even this is limited to prescription of medicines. The challenges the doctor-in-charge has to face,

among other things are an over crowded OP clinic, a mix of patients ranging from paediatrics to geriatrics, and lack of skill to handle geriatric ailments. While the rich and the affluent are reaching for the far superior private health care facility with super specialty services, the poor and the downtrodden have to satisfy with the little services available under the public health care system

The benefit of focused investments on specific problems by health systems has been repeatedly revealed by the history of health care. Eradication of smallpox, and near eradication of many of the infectious diseases is but a few examples. What we have, especially in the rural set up is a well-placed health care delivery system with the Primary Health Center as the core. Helping and assisting the family in the care of elderly can be made an integral part of the fieldwork which will reduce the patient load of the hospital enabling the Physician to attend to those in real need. The existing field staff can be trained for measuring blood pressure, checking urine sugar, imparting home based exercise program, give advice regarding nutrition, reference to hospital, and above all to creation of sense of belonging in the community. In a study assessing the effect of a home-based exercise program to prevent falls it was found that the incidence of falls was reduced (Tobin et al., 2001).

What is to be done?

In order to develop appropriate treatment programs for the geriatric patients, the practicing physician should in addition to acquiring the skill and knowledge in geriatric medicine, be aware of the various socio-economic factors influencing the patients and also the family and community resources available to him. Some of the most important factors that need special mention are:

1.Many of the health problems of elderly are essentially the result of non-medical factors, but it is because of the misconception of equating the problems of old age with illness the intervention of physicians are often sought.

2. Stress and isolation, the hardest and inevitable result of the fore mentioned socio economic challenges are closely associated with disease and illness. The problems are also multifaceted and hence a multidisciplinary solution is required to provide comprehensive care to the elderly. For this the Physician has to coordinate his/her skill with that of other social and health professionals.

3. In meeting these challenges family can be considered as the most important and effective resource to the Physician. The family can help the physician by assisting in the interpretation of the instructions to the patient, by collaborating in the treatment program and by providing financial support.

4. In addition to the family, other members of the community like social workers, religious organisations etc. can also be of help to the Physician. Their relationship with the elderly person and his/her family can be used to get information about the patient and patient's family and also in interpreting the recommendations of the physician to the patient and his family. Old age and disability in and of themselves may have little effect on the day-to-day function of the individual. It is really the degree of fitness, rather than the extent of pathology, that determines whether old people can manage by themselves and the amount of service they require from the caregiver and the family

5. 'Prevention is better than cure' though a favourite quote of 'experts' of the health field is almost always ignored. Simple effective screening programmes like oral cavity examination-for detection of pre-cancerous lesion in mouth, taking pap smear -a simple procedure of detecting early cancer cervix, vision and hearing testing, reviving the lost art of examination of peripheral pulses by medical doctors - which can detect Peripheral Vascular Diseases affecting legs impairing mobility, can to a large extent detect and prevent distressing ailments of the elderly people.

In the existing set up physician's involvement in the well being of the elderly is very limited in terms of competence and resources. Further the prevalent attitudes of many physicians are reflected in their disengagement from elderly patients requiring long term care. In order to effect a change in this attitude the education system should enable them to acquire appropriate knowledge and skills to extend meaningful care for the elderly. To some extend man power shortage in terms of geriatric personnel may be, met through non physician personal such as geriatric nurse social worker and other caregiver. For this also the schools of nursing and social work need to develop curriculum emphasising geriatric care. It may be also be necessary that legal and regulatory barriers to the use of services of non-physician personnel are overcome. In the circumstances the health and social programmes have to be restructured taking into consideration not only the growing number of elderly needing care and support but also the increase in the length of care-needed consequent on the increase in life expectancy. No assessment of an older person with even slight disability is complete without a

description of the people who are available to help. In a country where the proportion of elderly is fast growing restructuring of the health and social programs to ensure the well being of the elderly is a challenge. As in any field, in Geriatric medical field also what is done today in many ways will define what new crisis will exist 10 years from now.

Policy implications

Our findings suggests that development of ailments among the elderly is the culmination of a series of events that occur well ahead of old age and this point should to be borne in mind while developing measures to address these issues. Considering the fast growth of this segment of population it is necessary to develop short term and long-term health and social care delivery system.

Short-term measures should utilise the available resources. In the Government health sector a wide and time-tested system is now functional in rural areas. But this system is gradually stepping back from its initial vision of providing health care at door steps. This system with manpower of around 50,000 should be revived with proper training to various sections of staff. Purchasing some essential equipments and making it available to the grass root level workers like the multipurpose workers will help in early detection of common conditions which if undetected, will later lead to irreversible chronic condition which need long term care and skyrocketing of cost of treatment. Proper utilisation of the many idling buildings in the primary health centres all over the state which is around 400 in numbers may the answer for special out patient and inpatient care of the elderly patients. In the urban settings resources like NGOs and other social organisations may be retrained to cater to the needs of elderly people. Long-term measures should include a change in curriculum of the Medical and Nursing education, setting up of screening facilities for detecting ailments and setting up of multidisciplinary health care system for tackling the social as well as medical problems.

Conclusion

In a community based cross sectional study of 100 elderly persons above age 65 years of age we found that more than three fourth of them are suffering from medical ailments. It was also found that a significant proportion of elderly people suffering from ailments ranging from urinary tract infections to terminal illnesses like cancer are

unreported. Nearly half of those suffering from ailments are in need of regular intake of medicines and proper and detailed medical check up.

The prevalence of ailments was not only found to be less among those having higher education, living with spouse, having own income and having decision making capacity but it was also found that they cope with ailments better than those without these facilities.

An interesting finding was that only about half of the elderly were worried in their attitude towards life. Analysis also showed that there is no significant relationship between deterioration of health and attitude towards life.

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