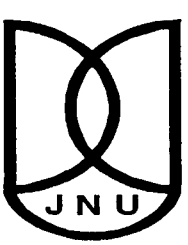
SOCIO-ECONOMIC AND HEALTH STATUS OF ELDERLY POPULATION IN INDIA:

A CASE STUDY OF UTTAR PRADSEH

Dissertation submitted to Jawaharlal Nehru University in partial fulfillment of the requirement for award of the degree of

MASTER OF PHILOSOPHY

YATISH KUMAR



CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI- 110067
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2011

Dedicated

To

My parents

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DECLARATION

I, Yatish Kumar, hereby declare that the dissertation entitled "**SOCIO-ECONOMIC AND HEALTH STATUS OF ELDERLY POPULATION IN INDIA: A CASE STUDY OF UTTAR PRADESH**" submitted by me for the award of the degree of **MASTER OF PHILOSOPHY** is my bonafide work and that it has not been submitted so far in part or in full, for any degree or diploma of this university or any other university.

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It is hereby recommended that the dissertation may be placed before the examiners for evaluation.

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Place: JNU, New Delhi

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List of Abbreviations Used

AD	Alzheimer's Diseases
ADL	Activities of Daily Living
CBR	Crude Birth Rate
CDR	Crude Death Rate
COIN	Centre for Old in Need
CVD	Cardiovascular Diseases
DFLE	Disability-Free-Life Expectancy
GBD	Global Burden Diseases
GOI	Government of India
HLE	Healthy Life Expectancy
IGNOPS	Indira Gandhi National Old Age Pension Scheme
LEWD	Life Expectancy without Chronic Disease
LIC	Life Insurance Corporation
MSJE	Ministry of Social Justice and Empowerment
NFBS	National Family Benefit Scheme
NGO	Non-Governmental Organizations
NMBS	National Maternity Benefit Scheme
NOAPS	National Old Age Pension Scheme
NPOP	National Policy on Older persons
NSAP	National Social Assistance Programme
PHC	Primary Health Centre
PPF	Public Provident Found
RGI	Registrar General of India
SES	Socio-Economic Status
TFR	Total Fertility Rate
UNDP	United Nations Development Programme
WFPR	Workforce Participation Rate
WHO	World Health Organization

Chapter 1

Introduction

Chapter: 1

Introduction

1.1. Introduction:

The Concept of ageing and old age are closely related. The old age is a static notion, while ageing is a dynamic one. (Padma, G. Rama.1994)[1]. Ancient Chinese scholars talked about seven phases in a man's life. In the 6th century B.C., Pythagoras has compared human life to the seasons. In both the cases, old age was deemed to be beyond 60 years (Stub, 1982)[2]

The 'elderly' group in a population is defined in terms of the proportion of person aged 60 years and above in the total population. Elderly population is an obvious consequence of the process of demographic transition. The French demographer Jean Daric who is one of the foremost experts on population ageing, defined population ageing as a process of continuous increase in the proportion of the aged in the total population (Rosset, E. 1964). [3] The incredible increase in life expectancy may be termed one of the greatest triumphs of human civilisation. The term "old" is always related to physical incapacity, biological deterioration, disabilities and psychological failures. Therefore, biological, psychological, and social factors are inextricably linked up with the process of ageing. The biological approach stresses the impact of ageing upon psychological system; the psychological approach concentrates upon mental functions and the social approach is concerned with the social aspects of ageing (Sati, P.N., 1996)[4]. The process of ageing depends heavily on the level and trend of fertility and mortality. When mortality is very high and the average expectation of life is low, than chance of people moving to old-age groups is meagre. When mortality declines due to improvement in health services and eradication of diseases, people at every age get an opportunity to survive and reach the next higher-age and ultimately

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[1] Padma, G. Rama., (1995). "An Analysis of Old-Age Security in Andhra Pradesh: A Comparative Study of Developed and Less Developed Region", Ph.D. Jawaharlal Nehru University (JNU)

[2] Stub, H.R., (1982). "The Social Consequence of Long Life". Springfield, C.C. Thomas.

[3] Rosset, E., (1964). Aging Process of Population: *A Pergamon Press Book,* New York, pp. 10-11.

[4] Sati, P.N., (1996). "*Needs and Problems of Aged*", New Delhi: Himanshu Publication, p.5-6.

survive to reach the old-age. The continuous growth of elderly population is a significant demographic trend of the twentieth century experienced by different societies. Throughout the twentieth century, the proportion of people aged 60 and above has increased in all countries of the world. This trend started earlier in industrialized countries, but now the countries in developing world are experiencing the same changes in their demographic profile. The tempo of ageing is more rapid in developing countries compare to developed countries. (S, Muthukrishnaveni, 2010)[5]

The discipline of "Gerontology" deals with the study of different aspects of the old-age population. The term "gerontology" is derived from the Greek word *"geras"* meaning old-age and *"logos"* refering to the study of the subject. (Joshi, A.K, 2006)[6]. The Gerontology is used in wider sense and encompasses the psychological, socio-economic and physiological aspects of old-age population. Social Gerontology is concerned with reciprocal relationship between individuals and society. The term Geriatrics deals with cause and remedies of physical pathology in old age senescence, in biological term it refers to the physiological aspect of growing old. And the term Gerontophobia is used to describe the fear of growing old or fear of hatred of the aged. The general characteristics of old-age are physical and psychological changes.

1.2. Statement of the Problem:

Demography of elderly also poses serious challenges to the developing countries in South America, Africa and Asia. This includes China and India, two of the oldest societies in the world, both of which undergoing extraordinary changes as a result of modernisation, urbanisation and globalisation in a very brief span of time. These accompanied processes along with explosive growth in their elderly population would result in China and India to house about 38 percent of the world's elderly (60+) populations by the year 2025. At present, China and United States of America have the largest proportion in this age group, followed by India and Japan. (Rajan.et.al, 2005)[7]

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[5] S, Muthukrishnaveni., (2010). *"Living Arrangements and Health Conditions of Elderly in Rural India"*, New Delhi, Serials Publications, pp.1-2.

[6] Joshi, A.K.., (2006). *"Older Persons in India"*, New Delhi, Serials Publication, pp, 6-7.

[7] Liebig, P.S. and Rajan, S.I., (2005). *"An aging in India, Perspectives, Prospects, and Policies"*, .New Delhi, Rawat Publications. pp, 3-4.

Elderly population is growing faster in developing countries than in developed countries. Consequently, developing countries will have less time to adjust to the consequences of population ageing. Most of the developing countries are facing major social and economic challenges. These include changes in the traditional family set up and the role of women that directly influence care for the elderly and population transition. Financial security is one of the major problems of the Indian elderly. If work participation among the elderly is considered as an index of poverty (if you work when you are old, you only do so because you need to) then in India approximately 60 percent continue to work beyond 60 years whereas in some developed nations only 2 percent over 65 years are part of the labour force. The decline of joint family system, migration of youth to cities and increasing costs of health care are a few of the problems of the aged in India. (Krishnaswamy, and Venkataraman, 2008).[8] It indicates a gradual shift of the dependency burden from younger to older. It has several far reaching policy implications.

With the increasing pace of population ageing, the health of older persons in India has been the focus of recent attentions. Considerable variations in morbidity exist with respect of gender, place of residence (rural/urban) and socio-economic status. Again, rapid change in demographic transition without a concomitant epidemiological transition is responsible for the dual load of infections and degenerative diseases in older persons.

1.3. Demographic Transitions: Process of Development of Elderly Population.

Demographic transition is one of the most influential ideas of the twentieth century. The theory of demographic transition is based on the actual demographic experience of western countries, which have moved from a condition of high mortality and high fertility with consequent slow growth of population to condition of low mortality and low fertility. These shifts are the combined product of economic development, industrialisation and urbanisation in developed countries. (Bhende, and Kanitkar. A, 2008)[9] A major characteristic of demographic transition in the world has been the considerable increase in the absolute number of elderly people. This has been especially true in the case of developing countries like India, where ageing is occurring more rapidly due to the decline in fertility rates

[8] Krishnaswamy, B and Venkataraman, K.., (2008). "Ageing in India", *Journal of Springer Science*, vol, 32, pp,258-268

[9] Bhende, A. and Kanitkar. A., (2008). "*Principle of Population Studies*", Himalaya Publishing House. pp.132-133

combined by increase in life expectancy of people achieved through public health programmes, medical advances, health services and improved lifestyle. About 60 percent of the elderly population live in the developing world and this will rise to 75 percent by 2020 (Bold, 2001).[10]

Richard Easterlin's framework envisages modernisation as influencing fertility through intervening variables of supply, demand, and cost of controlling births. He broadens the usually defined factors of demand, supply and costs of fertility regulation. Under 'demand' he includes the standard socio-economic determinants of the transition used in the modernisation hypothesis; 'supply factors' are the cultural elements that constrain natural fertility. 'Costs' are the monetary, time and psychic constraints in the use of birth control. (Easterlin's, R, 1978)[11]

Demographic Transition in India:

The first stage of demographic transition in India continued till about 1920 when both birth and death rate were very high. The second stage of demographic transition in the country began from the early 1920s and spread well up to early 1970s. During this period the major cause of high mortality due to famines and epidemics were brought under control and between 1921 and 1951, the country witnessed a gradual rise in population growth.

The third stage of demographic transition started during late 1970s when birth rate also started declining. This trend continued during 1980s and it is expected that in next couple of decades there would be faster decline in both birth rate and death rate. India will enter into the fourth stage of demographic transition by the year 2020. (RGI)

Premi (2009)[12] also opines that in India the major states would achieve total fertility rate of 2.1 (equivalent to net reproduction rate of one). Kerala and Tamil Nadu have already achieved that goal. The states in this respect are Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh and Uttaranchal where the goal of TFR of 2.1 is likely to be achieve by 2030. The difference in fertility and mortality rates will manifest themselves in

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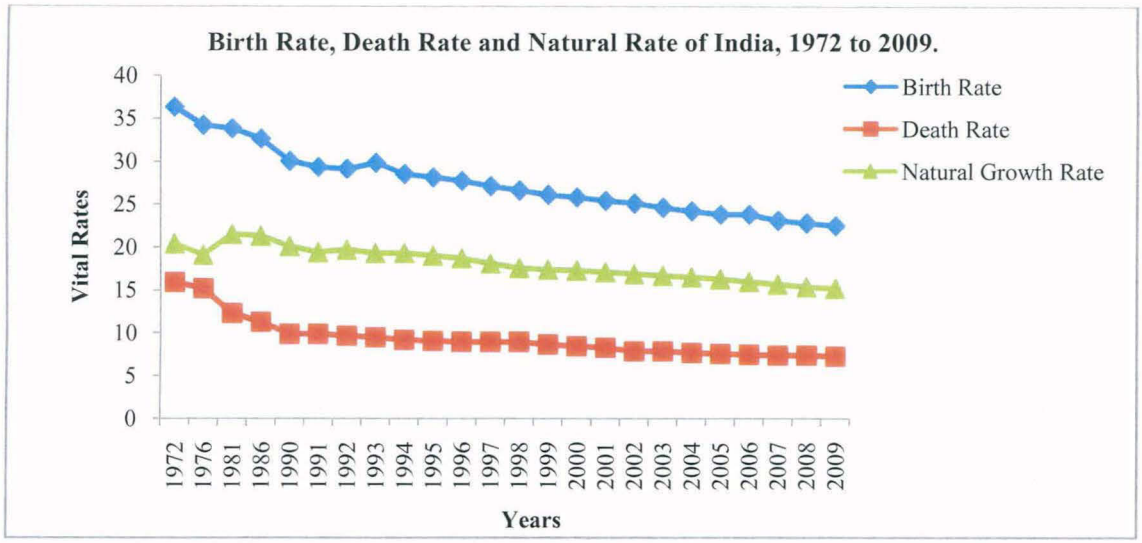
[10] Bold., (200)1. Health Status of Elderly in India. International Institute of Ageing, *United Nations*, Malta.

[11] Easterlin, R.A., (1978). "The Economics and Sociology of Fertility", in C. Tilly (ed.), *Historical Studies of Changing Fertility*, Princeton.

[12] Premi, M.K.., (2009). "*India's Changing Population Profile*", New Delhi. National Book Trust, pp.202-203.

differences in the pace of demographic transition and the BIMARU states, Assam, Haryana, and Orissa will take 10 to 15 years longer to complete their demographic transition. States such as Karnataka and Kerala are well ahead of other states, specifically the BIMARU states, in demographic transition (Visaria, L. and P. Visaria, 2003).[13] There are also rural urban differentials in the pattern of ageing.

Figure: 1.1



Source: Sample Registration System (SRS), 1972-2009

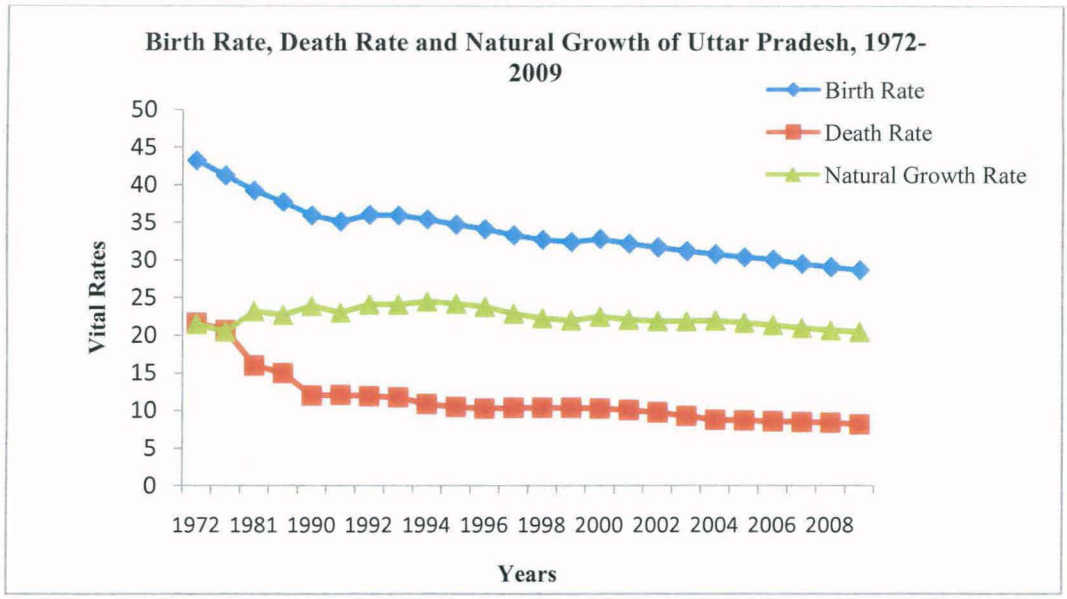
The decline in death rate during the 1970s was almost the same as the decline in birth rate leading to a plateau in population growth rate during the 1960s and the 1970s. Fig. 1.1 there has been faster decline in birth rate than decline in death rate during the 1990s. The major cause of high mortality was famines and epidemics. However, the pace of decline in fertility has been slower in the 1980s. Mortality rate has been declining at a faster pace in the 1990s. Continued decline in birth rate and death rates till 2009 has been due to development of medical facilities and improvement in the level of literacy particularly in the rural part of the country. Especially in the last two decades, the crude birth rate (CBR), although "still high, has been showing a declining trend all over the country". (Subramanian and James 2003),[14]

[13] Visaria, L. and P. Visaria., (2003). "Long Term Population Projections for Major States, 1991-2101", *Economic and Political Weekly*, No. 38(45), Nov. 8, pp.63-75.

[14] Subramanian, S.V. and James, K.S., (2003). "Towards a Demographic Transition", *Economic and Political Weekly*, Vol. 38, No. 12/13, pp. 19-29.

have analysed the impact of demographic transition in India. The first impact is observed in the age pyramid. The declining mortality rate would result in increased longevity of the people. Further, declining fertility would result in less number of people in the young ages. This would result in increase the proportion of old age people.

Figure: 1.2



Source: Sample Registration System (SRS), 1972-2009

The growth rate of the aged population increased almost continuously from the start of the transition. TFR higher than two will indicate that population will increase and TFR lower than two will result in the decrease the population (Karkal, M. 1999).[15] It is clearly seen that birth rates declined at a slower pace during the period from 1972-2009. Even in the states like Uttar Pradesh, birth rates have shown a drastic decease 43.2 in1972 to 28.7 per 1000 persons in 2009, a decline of 14.5 percent in almost four decades. It has continued to remain above 28 till 2009. Crude death rate (CDR) declined from 21.7 in 1972 and to 8.2 in 2009 in Uttar Pradesh. Uttar Pradesh has always experienced a very high of death rate during 1980s and 1990s, but the data shows significant decline from about 21.7 per 1000 persons in 1972 to 12 in 1990 almost 9.7 point decline in two decades. Death rates were high due to poor diet, primitive conditions of sanitation and lack of preventive and curative medical facilities in

[15] Karkal, M.,(1999). "Ageing and Women in India", *Economic and Political Weekly,* Vol. 34, No. 44, pp. 54-56

Uttar Pradesh. The decline in the death rate was a result of better medical facilities and control over communicable diseases. Death rates continued to decline in the last two decades in India (Premi, M.K. 2009).[16] The process of demographic transition in Uttar Pradesh is far behind than that of southern states of India due to lower socio-economic status of the people.

1.4. A Theoretical Framework:

Sati (1996)[17] has stated that Gerontology is the scientific study of ageing. It is multidisciplinary area of investigation with three core components: biological, psychological and social. These aspects include, ageing as an individual experience in the social context which seeks to understand the position of elderly within the society and the social consequence of ageing.

1.4.1. Disengagement Theory: One of the earliest theoretical perspectives used by gerontologists was disengagement which was originally formulated by **Cumming and Henry (1961).** Expressed in its simplest form this perspective states that independent of other factors such as poor health and poverty ageing involves gradual but inevitable withdrawal or disengagement from interaction between the individual and their social context. Central point of this theory is the assumption that both the individual and the wider society benefit from the process. Withdrawal for the individual may mean a release from social pressures like stress, productivity, competition and continued achievement.

The empirical evolution of disengagement as a theory of ageing must address three core aspect of the theory: There are

- Disengagement is a lifelong process for most individuals and it takes place over a period of time rather than suddenly throughout the life course, where an individual is continually acquiring and dropping particular social roles.
- There is an implicit statement that disengagement is inevitable because death and biological decline are inevitable.
- Disengagement is seen as adaptive for both society and the individual.

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[16] Premi, M.K.., (2009). "*India's Changing Population Profile*", New Delhi, National Book Trust, India, pp, 201-203.

[17] Sati, P.N., (1996). "*Needs and Problems of Aged*", New Delhi: Himanshu Publication. pp. 5-6.

1.4.2. Exchange Theory:

According to **Dowd (1980)**[18], this approach suggests that the lives of elderly people are shaped by the relative power resources of the social factors involved. Although exchange theories recognised that old people in modern society tend to be disadvantaged because they generally posses less power resources compare to young people.

These theories also recognise that there are few exceptions. Thus, although the long term 'exchange' view recognises that possession of resources also leads to power in social relationships, the short-term view appreciates the creative ability of humans to use resources in unique ways. In old age the interests once again become dominant. Age status becomes a permanent identity. There is another age stratum to move to after one has reached old age.

Elderly people are treated as a distinct homogeneous group in various stages of adjustment to the ageing process. Such theories are based on the implicit assumption that the status of older people can be explained in isolation to the rest of the social and economic structure in any society. Most important of all, the stereotype of the elderly as a homogeneous group with social needs has exerted a considerable influence on both public attitudes and social policies towards this group. Their concern has been the social creation of dependent status and the structural determinants of the competitive relationship between elderly and younger adults in the labour job market. Simmons (1945)[19] argued that the ability of older persons to maintain reciprocal relationship was the key to the status of the aged. It is however only recently that Dowd (1980)[20] has proposed as explicit theory of old age as social exchange which seeks to explain the decreased social interaction of later life (Victor,1987)[21]

1.4.3. Modernisation Theory:

For the first time this theory was proposed by **Cowgil and Homes (1972)** in a cross-cultural study that analysed the status of the aged in fourteen different societies. The major hypothesis

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[18] Bali, A.P., (1999). "*Understanding Greying People of India*", New Delhi: Inter- India Publication, pp, 20-23.

[19] Simmons, L., (1945). "*The Role of the Aged in Primitive Society*", New Haven, Connecticut: Yale University Press.

[20] Dowd, J. D., (1980). "*Stratification among the Aged*", Belmont, California Brooks/Cole publishing Company.

[21] Victor, C.R., (1987). "*Old Age in Modern Society*". A Textbook in Social Gerontology, USA, Croon Helm in Association with Methuen, Inc.

of this theory was that the role and status of the aged varies inversely according to the degree of modernisation in a society.

According to **Rostow (1978),** there are four stages of modernization theory:

1. The industrial stage in which mortality and population growth decline and life expectancy increase as a result of improved health care and living conditions.
2. The take-off-stage consisting of growth in a market economy and an increase in achievement orientation among the population.
3. The drive to technological maturity which includes a growing industrial economy, urbanisation and mass education and,
4. The high mass consumption stage, in which a wide range of consumer goods and services appear.

1.4.4. Development Theory: Development theory has resulted in the categorisation of the elderly. Such an analysis attributes minimal importance to the social context in which ageing takes place and disregards completely the external constraints which influence the old-age process.

1.4.5. Age stratification Theory: Age stratification theory suggests that age is one variable which determine the particular roles an individual will play in the society. Society is often conceptualised as being stratified or divided, along a number of dimensions such as social caste or ethnic status. Age stratification reflects and creates differences in capacities, roles, rights and privileges related to age. Thus, the elderly, the middle age and teenagers are such as distinctive status groups. Age stratification model suggests that the link between ages of a social individual and his action in society may be either formal or informal. (Formal e.g., age of marriage; informal e.g. factual regularity) This theory indicates that socialisation is a lifelong process as people move through a sequence of roles as they age. The system of age stratification in society influences and is influenced by the changing social, political and economic fabric of the society. **(Cockerham 1991)**[22] Age stratification theory is attractive because it is logical and can analyse the interplay between macro and micro-level social processes as they relate to ageing.

[22] Cockerham, W.C., (1991). *This Ageing Society*, USA: Prentice Hall, pp, 52.55.

1.4.6. Continuity Theory:

The continuity theory comparatively a recent one is based on the premise that people retain a high degree of consistency. The theory contributes to our understanding of the ageing process by showing that the personality of people in the old age tends to be much the same as it was in the middle age. This finding is of great use in predicting the behaviour of the old people. Continuity theory is not a complete formulation in the literature on ageing. It is concerned with only one particular and limited aspect of ageing. It presents a micro rather than a macro orientation. Micro views allow us to see how individuals not the wider society construct their own behaviour among the elderly. However, the theory highlights some changing trends regarding the status ascribed to the elderly in various societies. The intention behind these theories has been the design of interventions either to help individuals age successfully.

1.5. Review of Literature:

This section presents a review of the available relevant studies. The review has been categorised into four sections. First section presents the demographic aspects of elderly. Second section deals with the socio-economic aspects of elderly. Third section presents the studies related to health status of elderly revised. In the last section social security and health care services related studies are dealt with. The review gives a clear perspective of the overall situation of elderly population.

1.5.1 Demographic Aspects of Elderly:

In the demographic sense, a society is considered to be aging when the future population will have a higher proportion of the population in older age groups. Ageing, an issue of global concern, is a product of demographic transition.

kumar, A.K., (2004)[23]

has opined that the rise in the proportion of the elderly population represent one of the most significant demographic shifts in the history. In 1995, there were 205 million people who

[23] kumar A.K., (2004). "The Old and the Ignored", *Frontline India's. National Magazine*, September 24, pp.90-95.

were over 60 years of age. In 2000 elderly population was 605 million and by 2050, that will be two billion. The number of elderly trebled over the last 50 years and an increase is expected in the next 50 years. As a proportion of the total world population, the number of elderly population will double in the next 50 years. This demographic change is fast turning the hair of policymakers prematurely gray throughout the world, especially in developing countries, where the growth of the aged population is taking place at a more rapid pace.

Muthukrishnaveni, S., (2010)[24] has stated that the world population is growing at a rate of 1.7 percent per year, while the population aged 55 years and older is growing at a rate of 2.2 percent per year. The population aged 65 years and older is growing at a rate of 2.8 percent per year. The reasons include improved life expectancy, public health programmes, medical advances, health services and improved lifestyle. India's elderly population is expected to increase by 123 million in 2020. India has seemed largest elderly population in the world after china.

Mini.G.K., (2009)[25] has stated that Europe has the highest proportion of people aged 65 and older (16 percent), but the older population is growing faster in several countries in East and South-East Asia. The developing countries of the world have seen a steady growth in the proportion of elderly population. More than half of the growth of elderly population in developing countries higher in the Asian countries.

The older population has been increasing steadily in number and proportion. According to Census of India, the proportion of elderly persons in India has risen from 5.63 per cent in 1961 to 7.44 in 2001 and is expected to be 9.87 in 2021. South India has the highest number of elderly persons and will maintain its lead for the next 40 years. With 19 million in 2001, to 70 million in 2051 the current growth rate of elderly population is higher than the general population growth rate of 2 percent. According to **Rajan and Mishra, (1999)**[26] in India 75 percent of elderly persons were livings in rural areas. About 48.2 percent of elderly persons were women, out of whom 55 percent were widows. 73 percent of elderly persons were

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[24] Muthukrishnaveni, S., (2010). "*Living Arrangements and Health Conditions of Elderly in Rural India*", New Delhi, Serials Publication, pp. 28-29.

[25] Mini, G. K.., (2008). "Socio-Economic and Demographic Diversity in the Health Status of Elderly People in a Transitional Society", Kerala. *Journal of Biosocial Science*.Vol.41, No 4, pp, 457-467.

[26] Rajan, S.I. and Mishra, U.S, (1999). "*India's Elderly Burden or Challenge*", New Delhi: Sage Publication, pp-22-23.

illiterate and dependent on physical labour. Proportion of elderly in the total population increased from 2.0 per cent in 1961 to 2.9 per cent in 2001.

1.5.2. (A) Social Aspects of Elderly Population:

Widowhood: The proportion of women in general and widowhood in particularly has increased. Much lower proportions of men are widowed compared to women in extreme old age. Two prominent reasons cited for such a great gender disparity in widowhood are the longer life of women compared to men and the universal tendency for women to marry men older than themselves. Also widowed men are much more likely to remarry and overcome their widowed status. **Singh, (1987)**[27] has established that financial problems are more common among widows in nuclear families. This also indicates economic insecurity to be having some bearing with the social strata of class and caste.

Gulati, L., (1993)[28] has opined that marital status strongly affects the condition of elderly women regarding the availability of family care and support. Indian women, who are widowed, are known to be widely discriminated against and seldom receive respect and care from the joint family.

Three main reasons for a greater incidence of widowhood (**Rajan, S.I. and Gulati, L. 1999)**[29] among women are:

- Substantial age difference between marriage partners because of differences in the ages at marriage.
- The differential life expectancy between males and females, and
- The differing proportion of old men and women who remarry.

Lillard, and Waite, (1995)[30] has given empirical evidences from more developed Western societies and state that married persons have better health and lower mortality compared with

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[27] Singh, K.and Singh R., (1987). "*Problems of Aged Women Haryana*", In M.L. Sharma and T.M. Dak (eds) Ageing in India, Ajanta Publication.

[28] Gulat, L., (1992). "Dimensions of Female Aging and Widowhood: Insights from Kerala Experience", *Economic and Political Weekly*, Vol. 27, No. 43/44, pp. 93-99.

[29] Rajan, S.I. and Gulati, L., (1999). "The Added Years: Elderly in India and Kerala", *Economic and Political Weekly,* Vol. 34, No. 44, pp. 46-51

[30] Lillard, L. A. and Wait, L. J., (1995). "Til death do Part: Marital Disruption and Mortality", *American Journal of Sociology*, No100, pp, 31–56.

the never married, widowed or divorced. Ninety per cent of India's elderly population live below the poverty line and 50 per cent of them are widows **(Times of India 08-02-2000).** Widows and widowers are especially vulnerable to poverty, inadequate care and neglect in old age. Incidence of widowhood is higher among females than for males in the 60+ age group. **Bose. (2000)**[31] has found that elderly widows are the most vulnerable sections of the society. The increasing life expectancy of women, social disapproval of widow remarriage, patrilineal inheritance and problems of finding employment all render widows more vulnerable than most other groups in the society.

Jamuna., (1998)[32] argues that the social disabilities like widowhood, societal prejudice and segregation add much to the frustration of elderly people.

Agarwal ., (1998)[33] finds widowhood is often coterminous with old age among women, and that the male advantage in property inheritance and control that characterise much of India renders women progressively more vulnerable.

1.5.2. (B) Economic Aspects of Elderly Population:

Raj and Prasad., (1971)[34] conducted a survey of 327 aged people over 50 years of age belonging to 219 families from 3 villages in Lucknow districts (U.P). Family organisation occupation, marital and socio-economic status, personal habits and addiction, dependency and status of the aged person in their family, living arrangements, disabilities and diseases and attitude towards life were investigated. The results show that 66.9 percents of the cases were leading from poor to very poor economic life; 88 percent were suffering from various disabilities such as blindness, deafness, and paralysis of lower limbs, 31.1 percent were found depressed because of death of spouse or children's infirmity. Rural India reflects a greater degree of financial insecurity of the aged.

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[31] Bose, A.., (2000). *"Growing Old in India"*, New Delhi B.R Publishing, Corporation, pp, 25-30.

[32] Jamuna, D., (1998). "Challenges of Changing Socio-Economic and Psychological Status of the Aged", *Research and Development Journal*, No, 5, Vol, 1, pp, 1-15.

[33] Agarwal, B., (1998). "Widows vs. Daughters or Widows as Daughters", *Modern Asian Studies,* 32, pp, 1–48.

[34] Raj, B. and Prasad, B.G., 1977. "A Study of Rural Aged Person in Social Profile", *Indian Journal of Social work,* pp 155-162.

Sharma and Dak (1987)[35] argue that an inadequate financial resource was indicated as one of the major problems of the Indian elderly. This also seems to be of a higher degree among female elderly compared to their male counterparts.

Punia and Sharma., (1987)[36] suggest economic insecurity to be the sole concern of elderly in barely sustainable households of rural India. The worries of the elderly are on two fronts in relation to social strain and the economic dependence. The worries on social strain aspects are more compared to economic worries for those who live in nuclear families or living alone.

Chanana and Talwar, (1987)[37] have analysed that the work-participation rate of the elderly males is very high in India mainly because of agrarian economy of the country where there is no specific age of retirement. Compared to the elderly males, work-participation rate of the elderly women is much lower. Similarly the higher proportion of the elderly males are economically active in rural than in urban areas.

Usha Rani, and Naidu., (1989)[38] have studied the perception of the old age people in the rural areas of South Central Andhra Pradesh and found that 75.83 per cent of the parents felt their sons to be less useful to them in old age while 71.50 per cent also felt that children are now less willing to live with their parents after marriage.

Kumar, V., (1999)[39] shows that among other factors out-migration of younger generation members might have been a major factor pushing elderly people to seek income by participating in the workforce.

Panda, P. K., (1998)[40] opines that increased poverty and economic stress in rural Orissa is likely to erode the traditional family care and support for the elderly in general, and for the

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[35] Sharma, M.L. and Dak, T.M., (1987). "Aging in India", Rajan, S.I. and Mishra, U.S, (Eds), (1999), India's Elderly Burden or Challenge, New Delhi: Sage Publication, pp, 36-37.

[36] Punia Deepa and M.L. Sharma., (1987). "Family Life of Rural Aged Women" , in M.L. Sharma and T.M. Dak (eds) Ageing in India, New Delhi, Ajanta Publication, pp,57-66.

[37] Chanana, H.B. and Talwar, P.P., (1987). "Aging in India: Its Social - Economic and Health Implications", *Asia Pacific Population Journal,* vol. 2, No.3, pp.23-38.

[38] Usha Rani, and Naidu, D.A., (1987). "Old Age Security and Unity of Children", in Pati, R.N. (eds) Ageing in India, New Delhi, Ajanta publication, pp, 47-58.

[39] Kumar, V., (1999). "Population Ageing in India: Causes and Consequences", *Research and Development Journal,* 5, 2.

[40] Panda,P.K., (1998). "The Elderly in Rural Orissa, Alone in Distress", *Economic and Political Weekly,* Vol. 33, No. 25, pp. 45-55.

elderly women in particular. Therefore, there is a need for the government to provide social security to the elderly women, especially those who are living alone. Economic dependence is one of the major disabilities that very often affect the wellbeing of older persons. Economic disabilities are manifested in two ways. First, the status of economic dependence may be caused by retirement for a person employed in the formal sector. Secondly, for a person in the rural or urban informal sectors, it may result from their declining ability to work because of decreased physical and mental abilities.

1.5.2. B (i) Living Arrangement:

Shah, (1993)[41] has stated that lack of homely care is the prominent reason cited by the elderly towards their preference to stay in old age homes. Besides economic reason, family quarrels and handicaps were found to have induced the elderly to move into old age homes.

Martin, L. G., (1989)[42] has observed that significant changes in the familial relations may take place with an increasing age, deteriorating health, the diminishing job opportunities especially when an economic loss in involved. The family members and the society may feel the burden of the elderly when the elderly are unable to participate in economic activities but need an increasing amount of medical health care.

According to **Prakash, I.J., (1999)**[43] living arrangements are influenced by several factors such as gender, health status and extent of disability, socio-economic status and societal traditions. The most crucial aspect of living arrangement of the elderly is co-residence with adult children in extended families or multi-generational households, where kin provide income, personal care and emotional support to the elderly. The elderly not only receive care and support from children, they also contribute to the overall well-being of the family in terms of their support in child care, family decision- making, other household tasks and daily activities. In India, the older people are viewed as an integral part of the family, with high esteem and prestige. **Chen, C.A., (1998)** [44] investigated the consequences of the living

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[41] Shah, V.P., (1993). "The Elderly in Gujarat. Mimeograph", Department of Sociology, Gujarat University, Ahmadabad. (Eds.) Rajan, S.I. and Mishra, U.S, 1999. "India's Elderly Burden or Challenge", New Delhi: Sage Publication, pp, 40-42.

[42] Martin, L. M., (1989). "Living Arrangements of the Elderly in Fiji, Korea, Malaysia and the Philippines", *Demography*, vol, 26(4).

[43] Prakash, I. J., (1999). "Ageing in India", *World Health Organization*, (Geneva.)

[44] Chen. A., (1998). "Change of Living Arrangements and It's Consequences among the Elderly in Taiwan", Proceedings of National Science Council, ROC (C), Vol. 9, No. 2, pp. 364-375.

arrangements on the elderly in Taiwan. Migration, resource change and life cycle events are significant factors that decide the living structure during old age.

Panda, P.K., (1998)[45] in a study conducted in Orissa has found that living arrangements of the elderly ware not homogeneous, but differ significantly in terms of age, gender, marital status and economic status. For instance widowed and poor (landless and low income) are more likely to live alone. Moreover, the differences in economic status are remarkable when patterns of living arrangements are compared by gender. This is explained by two factors: **first,** majority of the elderly women are widowed, and therefore as they grow old, the likelihood of living alone increases. **Second,** in patrilineal society such as Orissa, Women do not inherit land, the most valuable resource for survival. Therefore, women more compared to men become vulnerable as they grow old.

A study by **Kumar, S., (1996)**[46] has compared the living arrangements of the elderly in two Indian states, namely, Kerala and Uttar Pradesh and found that an overwhelming majority of the elderly in both states live with their offspring. The study also showed that the traditional value system of taking care of the elderly by the family and younger generations continues to persist in the country though demographic transition and cultural norms appear to be somewhat different in the two demographically divergent states.

1.5.2. B (ii) Retirement:

The retirement age, generally considered as a demarcation point for the aged. Retirement from work has been identified as one of the most stressful event of life. **Pinge. (1982)**[47] has stated that generally retirement age is linked with old age. Post-retirement problems are considered as old-age problems. In India benefits such as pension, provident fund and gratuity funds are provided to retired persons. **Dhillon. (1992)**[48] has observed that sudden retirement does have an adverse impact on loss of role, status, power, opportunities for interactions and loss of an occupational identity. It leads to low morale, depression and

[45] Panda,P.K ., (1998). "The Elderly in Rural Orissa, Alone in Distress", *Economic and Political Weekly*, Vol. 33, No. 25, pp. 45-50.

[46] Kumar, S., (1996). "The Aged in India: Comparative Study of Socio-Economic Conditions in Kerala and Uttar Pradesh", published PhD Thesis, IIPS, Bombay.

[47] Pinge, N.D., (1982). "The Bogey of Retirement", *Economics Times*, 30th May, pp, 1-4.

[48] Dhillon, P.K.., (1992). "*Psycho-Social Aspects of Ageing in India*", New Delhi, Concept Publishing Company, (ed.) Rajan, S.I. and Mishra, U.S., 1999. "India's Elderly Burden or Challenge", New Delhi: Sage Publication. Pp, 327-328

loneliness. Retired people face retirement without any planning and preparation. The retired are not very happy about the age of retirement as most of them would continue working if it is possible. Loss of earnings has been stated by the retirees as their greatest deprivation after retirement.

1.5.3. Studies on Health, Morbidity and Nutritional Status of Elderly:

A general appraisal of the health status of older Indians reveals a few pertinent points:

- A large proportion of geriatric morbidity remains occult due to ignorance and lack of access to health facilities.
- The extent and severity of the dual load of degenerative and infectious diseases among older persons in India, the so-called "double disease burden," is greatly determined by socio-economic factors.
- Subtle difference exists between urban and rural elders due to environmental, cultural, and socio-economic differences and large vulnerable groups such as older females, neglected, handicapped elders or the poor elderly who need more vigorous attention.
- Finally, numerous unhealthy lifestyle factors such as smoking seriously affect health in later life. **(Liebig, and Rajan, 2005)**[49]

Venkoba. R., (1986)[50] has stated that improvement in health facilities has improved longevity in India, however typical socio-economic conditions like poverty, breaking up the joint family system and poor service for the aged pose a psychiatric threat to the elderly. The aged found in India usually suffer from high blood pressure, heart disease, accidental injuries, strokes, cancer, diabetes, lung disease, kidney infection and disease of joint and bones. Decline in vision, hearing and sensitivity of taste are the other common deficiencies of the old age.

Randhawa (1987)[51] has studied the problems of the aged in rural and urban areas of Patiala and has indicated that a slightly higher proportion of the rural aged had serious problem

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[49] Liebig, P.S. and Rajan, S.I., (2005). "An aging in India, Perspectives, Prospects and Policies", New Delhi, Rawat Publications, pp, 68-69.

[50] Venkoba, R.A., (1986). "Depression in the Aged", In Rao, A.V (eds.) Depressive Disease, New Delhi: ICMR, pp, 153-163.

[51] Randhawa, M., (1987). "The Problems of the Aged in Rural and Urban Areas of Patiala": A Case Study in Social Gerontology. Punjab university of Patiala.

compared to the urban aged during their illness and were dependent on their sons or nephews for meeting their medical expenses. Health status of the older people in the urban areas was better than that of their rural counterparts.

Dey's (1989)[52] has studied the problems of old people in Samastipur (Bihar) and has revealed that general health of rural aged was poor as compared to the urban areas. Rural aged suffered more from reduced eyesight, loss of hearing, loss of teeth, cough and cold, joint pain and asthma, and were not getting medical treatment regularly.

Raju, S., (2000)[53] has stated that the majority of aged in India suffer from chronic bronchitis, anaemia, blood pressure, chest pain, heart attack, kidney problems, digestive problems, change in vision, diabetes, and depression.

Tripathi, R.M., (2001)[54] in this study of health condition of the aged population of Allahabad city found that the health of the aged male is better than that of his female counterpart. Most of them suffer from more than one health problem. The most common illnesses are abdominal problems, cold, cough and fever. Almost all the respondent of this study have gone for allopathic treatment for their major ailments. More than half the patients obtained treatment from private hospitals and only a very small minority form the other sources.

Sarasa, R.S., (2001)[55] has found that older people suffer from chronic conditions. The duration of both acute and chronic conditions is longer for the elderly and their chronic conditions are more likely to be lethal. Frequent chronic ailments among the elderly are Diabetes Mellitus, Hypertension, Cardiovascular diseases, Cancer, Arteriosclerosis, Kidney diseases, Parkinson's disease, Arthritis, Dementia etc. Most often elderly may suffer from multiple chronic conditions, visual defects, hearing impairment and deterioration of speech which can cause social isolation.

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[52] Dey, S., (1989). "A Study of the Physical, Economic, Social and Psychological Problems of Aged", pp, 2-7

[53] Raju, S., (2000). "Ageing in India: An Overview.", In Murli Desai and Siva Raju (Eds) Gerontological Social Work in India: Some Issues and Perspectives. New Delhi: B.R. Publishing Corporation.

[54] Tripathi, R.M., (2001). "Health and Health Services from Senior citizens", A Case Study of Allahabad, *Journal of man and Development,* Vol, 23, No, 3.

[55]Sarasa, R.S., (2001). "Socio-Economic Conditions, Morbidity Pattern and Social Support among the Elderly Women in a Rural Area", Seminar Paper, pp, 1-78.

Khilnani, G.C. and Kumar, V., (2001)[56] argue that in most of the developing countries, including India the scourge of tuberculosis continues unabated. Compared to more classical upper lobe disease in younger patients the elderly population more likely to have widespread patchy infiltrates and in the lower lobe. Thus, the possibility of missing the diagnosis of pulmonary TB is significantly higher in elderly.

Jun. C.Z., (2002)[57] has worked on the health status of the elderly in rural China and has indicated the likelihood of being in poor health to be higher for those who live without a spouse both among male and female elderly.

Rao, M.K., (2003)[58] analysed the health status of rural aged in Andhra Pradesh and found that health problem tends to increase with advancing age and very often the problems aggravate due to neglect, poor economic status, social deprivation and inappropriate dietary intake. Serious illness lack of medical facilities and poor economic condition might be responsible for the lower health status of the aged.

Tsai, and Chuang., (2004)[59] have studied the prevalence of malnutrition among elderly persons aged 60 to 80 years in Taiwan and reported it to be between 2% and 5%. Malnutrition is found to be associated with several neuropsychological problems. Nutrition of the elderly affects immunity and functional ability as it is an important component of elderly care.

Pryer, and Rogers., (2006)[60] indicates that poverty is a strong predictor of poor health and malnutrition among older persons who live in poverty. A study in urban slums of Bangladesh has found significant associations between poor socio-economic status and poor nutritional status in adults.

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[56] Khilnani, G.C. and Kumar,V., (2001). "Tuberculosis of the Elderly", In S.K. Sharma (Ed.) Tuberculosis, pp, 434-438. New Brothers Delhi: Jaypee Medical Research Publication.

[57] Jun, C. Z., (2002). "*Living Arrangements and Health Status of the Elderly in Rural China*", Seminar Paper Submitted, IIPS, Mumbai.

[58] Rao, M.K.., (2003). "Health Status of the Rural Aged in Andhra Pradesh; A Sociological Perspective", *Research and Development Journal,* Help Age India. Vol 9, No 3.

[59] Tsai, A.C, and Chuang Y.L., (2004). "Assessment of the Nutritional Risk of 60-year-old men and women in Taiwan", Public *Health Nutri* New Delhi. *tion*, vol 7, pp, 69–76.

[60] Pryer J and Rogers S., (2006). Epidemiology of Under Nutrition in Adults in Dhaka Slum Households, Bangladesh. *Journal of nutrition Health* Vol, 60, pp, 815–822.

Krishnaswamy and Venkataraman., (2008)[61] has stated that 45 percent of the elderly population living in urban and rural areas are suffering from chronic diseases and about 5.4 percent are found to be physically immobile. The common diseases among the ambulatory elderly are hypertension, cataract, osteoarthritis, chronic obstructive pulmonary disease, heart disease, diabetes, benign prostatic hypertrophy, dyspepsia, irritable bowel syndrome and depression which account for 85 percent of the burden of ill health in India.

Alam, (2008)[62] has found that caste widowhood and public health measures were major determinants of health status among the rural elderly.

Kabir, Z.N. and Ferdous, T., (2009)[63] has described that the low social status, discriminatory practices based on gender, early age in marriage, food taboos and lack of attention to health to be responsible for the poor health of older womens in India. This scenario may reflect the situation of older women in Bangladesh as well, where social and cultural practices are similar to those in parts of India. Poor health and low well-being in old age of rural women in many low-income countries is a result of high burden of work and insufficient food intake resulting in nutrition deficiency.

Mini, G.K., (2009)[64] examines the socio-demographic correlates of health status of elderly persons in Kerala in terms of three components, perceived health status, physical mobility and morbidity level.

1.5.3. Disabilities

Disability among the elderly revealed that around 10.9 per cent of the elderly suffered from physical impairment. Among these nearly half were visually disabled and remaining half were suffering from disabilities related to hearing speed or locomotor functions. It is estimated that around 8.2 million aged persons will suffer from some type of disability.

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[61] Krishnaswamy, B and Venkataraman, K.., (2008). "Ageing in India", *Journal of Springer Science,* vol, 32, pp. 258-268.

[62] Alam, M., (2008). "Ageing, Socio-Economic Disparities and Health Outcomes: Some Evidence from Rural India", Working Paper E/290/2008, New Delhi, *Institute of Economic Growth,*

[63] Kabir, Z.N. and Ferdous, T., (2009). "The multidimensional Background of Malnutrition among Rural Older Individuals in Bangladesh a Challenge for the Millennium Development Goal". *Journal of Public Health Nutrition:* vol. 12(12), PP 2270–2278.

[64] Mini, G. K.., (2008). "Socio-Economic and Demographic Diversity in the Health Status of Elderly People in a Transitional Society", *Kerala, Journal of biosocial science.*vol.41, No 4, pp,457-467

Roy., (1995)[65] stated that the prevalence rates of disability has been higher for males than for females in both urban and rural areas, although women have slightly lower life expectancy than men. Disability-free life expectancy was greater for women than men. Also life expectancy is higher in developed urban areas than in the less developed rural areas.

Dillip, T.R., (2001)[66] in his study of burden of ill health among elderly in Kerala has found that visual disability was the most prominent form of disability among elderly, followed by locomotors, hearing, senility and speech disability. Sex wise differentials shows that the condition like visual, hearing and speech disabilities to be predominant for females than males.

Audinarayana, et.al, (2002)[67] shows that the likelihood of physical destabilises increases significantly with an increase in age. Elderly persons who live in urban areas have significantly lower proportion of physical disability as compared to their rural counterparts. It was also observed that elderly people who belong to the higher socio-economic class were found to have lesser disabilities.

Pandey, M.K., (2009)[68] have stated that poverty and poor health among elderly are the matter of grave concern, especially in rural areas where a significant proportion of aged population live their life without enough income and functional autonomy and with chronic ailments and disability.

1.5.3. Health Care Services and for the Elderly Population:

Utilisations of standard and general health care services vary from country to country. India is a subcontinent of villages has with deep-rooted cultural tradition. Over the years health care services for the elderly has become expensive but it is not the financial capability alone that determines the delivery of care. Attitudes and perceptions are also determining factors.

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[65] Roy, S.G., (1995). "National Comparisons of Disability Indicators", the Indian Example. Proceeding the 50yh Sessions of the international statistical institutes, Beijing.

[66] Dillip, T.R., (2001). The Burden of Ill Health among Elderly in Kerala. *Research and Development. Journal* Help Age India, 7:2, pp.7-11.

[67] Audinarayana, N. And Sheela., (2002). "Physical Disability among the Elderly in Tamil Nadu; Pattern, Differentials and Determinants", Health *and Population- Perspective and issue,* 25:1, pp. 26-31.

[68] Pandey, M., (2009). "Poverty and Disability among Indian Elderly: Evidence from Household Survey", ASARC Working Paper.

Krout, J.A., (1984)[69], in the study of the participation of the urban elderly in a wide range of programmes, reports that greater use of services is found among the elderly with more chronic health conditions, more formal education and higher incomes.

Biswas, S.K., (1994)[70] has observed that for major illness, about 70 percent of rural elderly obtained allopathic treatment, 10 percent homeopathic or folk medicine and 20 percent received help from family, fellow villagers or from themselves. The trend was quite different for minor illness, half of the elderly obtained treatment from family, villagers or themselves, while only 40 percent used allopathic treatment.

Dhar., (2001)[71] has opined that the lack of social support increases the risk of mortality. The supportive social relationship is associated with lower illness rates, faster recovery rates and higher levels of health care behaviour.

1.5.4. Care and Support for the Elderly Population:

Sunder Lal et al., (1999)[72] stated that in India the elderly are playing effective roles in the joint family system it provides them security and emotional support.

Jamuna., (2001)[73] discusses some of the pressing issues with regard to work status, dependency ratio, living arrangements, health and disability status family kinship relationship and availability of social security provisions for the elderly.

She highlighted the increasing stress and strains on the primary care provides and the fast pace of social change that is affecting traditional care-giving mechanism for the elderly.

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[69] Krout, J.A., (1984). "Utilisation of Services by the Elderly." *The Social Service Review*, Vol. 58, No. 2, pp. 281-290.

[70] Biswas, S.K.., (1994). "*Implication of Population and Aging*", In C.B. Ramachandra and B. Shah (Eds.), Public Health Implication of Ageing in India, pp, 22-35, New Delhi, Indian Council of Medical Research (ICMR)

[71] Dhar, H.L., (2001). "Gender, Ageing, and Society", Journal *of the Association of Physician of India*, pp. 12-20.

[72] Sunder, L. and Chadha, S.L., (1999). "A Study of Senior Citizens in Rural Areas", *Health for the Million*, Help Age India, 25:5.

[73] Jamuna D., (2001). "An Investigation of Psychological Factors Including Quality of Life of Very Senior Citizens from the Rural and Urban Areas of Andhra Pradesh", New Delhi, ICSSR

Mehta, B., (2003)[74] has stated that the elderly considers their family as the major support system because they prefer to approach the family in case of any problems and only in absence of the family they sought help from the neighbours.

1.5.5. Programmes and Policies for older persons:

In aging, the most recent and most significant international consensus document is the Madrid International Plan of Action on Ageing 2002. **Article 42 and 47** deal with social security issues of the elderly while other section of the constitution focus on labour welfare, including condition of work, provident fund, liability for worker's compensation, invalidity, old-age pension and maternity benefits. These declarations embrace a modern concept of social security. The National Social Assistance Programme (1995) made the first attempt to provide a social security network for the elderly through the provisioning of pension scheme for the elderly destitute. National Policy on Older Persons (NPOP) developed in 1999 and the Older Persons Maintenance Care and Protection Bill (2005) was developed as responses to the increasing life expectancy and with the goal of improving the health of the older persons (Government of India 1999, 2007). The Government of India in 1999 developed and adopted the National Policy for Older Persons. Intervention areas include financial security, health care, shelter, welfare and other needs of elders; protection against abuse and exploitation and services to improve the quality of life of elders.

1.5.6. Role of Non-Governmental Organisations:

Non-Governmental Organisations (NGOs) represent a significant resource for health care delivery for older persons in India. Some of these are quite active in providing outreach services and organising medical camps in their local areas of operation.

1. Age-well Foundation has set up a helpline for older persons in Delhi. The volunteers are constantly available to attend to matters of medical or emotional nature, as well as legal and financial advice.
2. Dignity Foundation aims to enrich the lives of senior citizens, enabling them to live independently. The Foundation has provided a helpline, exclusively dedicated for the help and rescue of older persons.

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[74] Mehta, B and Mallya, I., (2003). "Self Appraisal of Elderly in Slums of Vadara City", *Research and development Journal*, Help Age India, Vol.7, No.2, pp, 25-28.

3. The Centre for Old in Need (COIN) is a non-profit, non-racial, non-political and non-religious organization dedicated to ameliorate the sufferings of old people who need care.[75]

Caritas India:

It is the official national level organisation of the catholic Bishops Conference of India. It aims to promote care for the sick, crippled, handicapped and destitute aged.

The Indian Association of Retired Persons:

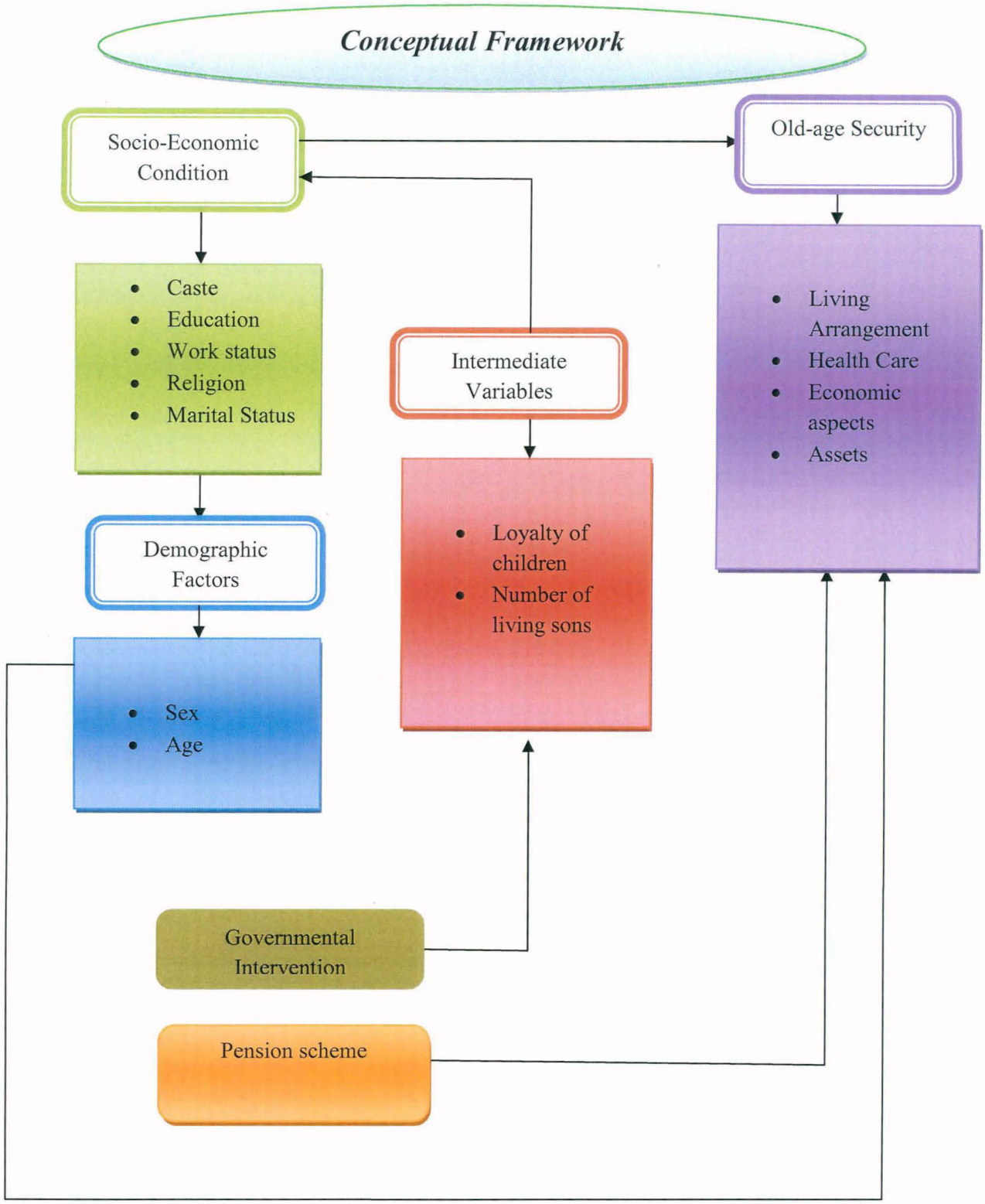
Having its headquarters in Bombay, it is funded through membership fees, donation and grants-in-aid from the government and undertakes a variety of programmes for the welfare of retired persons. It opens its membership to all retired persons and those who are above 60 years of age and providing socio-medical and financial help to its members.

Venkateswarlu, V., (2008)[76] stated that help Age India, a leading NGO, working for the cause and care of the elderly operates 56 Mobile Medicare Units across the countries, which provide primary medical care to those who cannot approach regular doctors due to financial assistance. It is the country's largest voluntary organization with 23 regional offices, getting nominal grants from the central government. The primary focus is to provide financial support to other voluntary organizations in the welfare of the aged. U.K it is a founder member of Help Age International.

[75] Krishnaswamy, B and Venkataraman, K.., (2008). "Ageing in India", *Journal of Springer Science*, Vol, 32, pp, 258-268.
[76] Venkateswarlu Vankayalapati., 2008). "*Problems of Aged Rural Area*", Kalpaz. Publication, pp.238-239.

1.6. Conceptual Framework:

Figure: 1.3



1.7 Objectives:

- To study the demographic pattern of elderly population in India and Uttar Pradesh.
- To analyse the socio-economic status of elderly population in India and Uttar Pradesh.
- To examine the spatial variation and characteristics of elderly in Uttar Pradesh and to examine the reasons thereof.
- To analyse the health status (morbidity and health care utilisation) of elderly in Uttar Pradesh by NSS regions.

1.8. Research Questions:

- How is the distribution of elderly related to the process of demographic transition?
- Which factors are responsible for the variations in the socio-economic status of elderly population?
- How is the utilization of health services affected by the socio-economic status of aged persons in the concerned regions?

1.9. Data sources:

The data from two different sources are used for the study. The size distribution of the elderly population by gender, age and social groups is drawn from the Census data 2001. To study the profile of the aged by disease occurrences or number of diseases, consumption, expenditure and such other analysis, the study relies on the NSSO (60th round-2004)

- Age data from the Census of India 2001.
- **Series A:** Demographic Status of Elderly Population and Decadal Growth of Elderly Population.
- **Series B:** Economic profile of elderly people, Work Participation rate, Age dependency ratio and other economic activities of elderly
- **Series C:** Social condition of elderly like, Literacy, Marital Status, and Religion, Index of Ageing,

Health related aspects examined by 60^{th} rounds of NSS (Morbidity, Health Care and the Condition of the Aged: Jan -June, 2004) have been also used for the study.

- The sample design for collecting the 60th round data was essentially a two-stage stratified design with census villages and urban blocks as the first-stage units (FSUs) for the rural and urban areas respectively, and households as the second-stage units (SSUs).
- The number of villages and that of urban blocks actually surveyed were 4755 and 2668 respectively and the numbers of households surveyed in the rural and urban areas were 47,302 and 26,566 respectively.
- Total of 73,868 households were surveyed in the 60th round NSS. The total number of household members covered in the survey was 3, 83,338. However this study is based on only the old-age population (60+) which totals 34,831 household members.

The survey mainly covered three aspects of information

- morbidity and utilisation of health care services including immunisation
- maternity care
- problems of aged persons and expenditure of the households on health care services.

1.10. Methodologies:

For the regional level analysis, all the districts of the state of Uttar Pradesh have been compiled and classified into five different regions at macro level. The classification of regions is based on the NSSO regions (2004). Region is essentially an intermediate unit between the district and the state, with each region consisting of several districts within a particular state. According to NSSO (2004), Uttar Pradesh can be divided into 5 regions:

1. Northern Upper Ganga plains
2. Central Region
3. Eastern Region
4. Southern Region
5. Southern Upper Ganga Plains

For studying the socio-economic status of aged, the indicators have been extracted from the Census data for the year 2001. The indicators are:

1. Sex-Ratio
2. Marital Status

3. Religion
4. Proportion of Scheduled Caste and Tribes
5. Literacy rates and Level of Education
6. Work Participation Rates
7. Main and Marginal-Workers
8. Disability

The study has been done to understand the status of elderly with respect to the total population of the concerned region.

For further analysis especially regarding the health of the elderly the data has been collected from the 60th round of National Sample Survey (NSS-2004). The core analysis, deals with the health status of the elderly people. For analysis the dependent variable is: **whether hospitalised (Yes = 1, No = 0)**

There are two types of independent variables used for the analysis. Socio-economic and demographic characteristics of an individual.

- Socioeconomic variables include social groups, marital status, and state of economic dependence, living arrangement, literacy and place of residence (rural/urban)
- Demographic variables include age and sex.

Logistic Regression: the logistic regression is one of that specific a functional relationship between a basically dichotomous dependent variable and categorical or metric scaled independent variables. In fact, it is method of multivariate analysis of the multiple regression model designed to deal with the situation when we have only the measurement of presence or absence. Logistic Regression is concerned with modelling the odds of dependent variables and the parameters for logistic are more easily interpreted it they are expressed as odd ratios. The basic form of logistic function is:

$$P= 1/1+e^{-Z}$$

In this analysis, both logistic regression and odd ratio are used. Odd ratio is the ratio of the probability of the event occurring to the probability of event not occurring. The logistic regression has been done to analyse the impact of demographic and socio-economic variables on the health status of elderly. The model expression is:

$$\text{Logit} = \ln[P_i / (1-P_i)] = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \ldots\ldots\ldots\ldots \beta_K X_K + e$$

β_o = is the intercept

P_i = is the probability that a person of hospitalisation.

β_o = Constant item representing the value of log $[P_i / 1-P_i]$ with the base line value of cell values X_1 to X_K in the model.

X_1 to X_K = independent variables associated with the process of ageing.

β_1 to β_K = regression coefficient associated with the independent X_1 to X_K.

e = Error turn representing unobserved variable that influence dependent variables.

K = explanatory variables.

The independent variables are coded as categorical variables and results are presented in terms of odds ratios for each of these variables which have been calculated. This follows as:

Independent variables		Categories of Variables
State of Economic Independence	1	Not Dependent on Others
	2	Partially Dependent on Others;
	3	Fully Dependent on Others
Age	1	60-69
	2	70-79
	3	80+
Sex	1	Male
	2	Female
Marital Status	1	Married
	2	Single
Living Arrangement	1	Living Alone as an Inmate of Old -Age Home
	2	Others
Social Group	1	Scheduled Castes
	2	Scheduled Tribes
	3	Others
Sector	1	Rural
	2	Urban
Literacy	1	Illiterate
	2	Literate

Religion	1	Hindu
	2	Muslim
	3	Others

The prevalence of any ailment or morbidity is defined as:

$$\text{Morbidity} = \frac{\text{Number of Ailing Person}}{\text{Total Number of Persons Alive in the Sample Household}} X\ 1000$$

Arokiasamy and Ghosh, 2009[77] has defined that the morbidity prevalence rate as the estimated proportion of persons reporting ailment suffered at any time during the reference period.

The WHO defines prevalence rate as the ratio between the number of spells of ailment suffered at anytime during the reference period and the population exposed to the risk. It measures the frequency of illnesses prevailing during the reference period in this study number of persons reporting any ailment during a 365 day period per 1000 persons.

$$\textbf{Annual Hospitalisation Rate} = \frac{\text{Number of Person hospitalized}}{\text{Total Number of Persons Alive in the Sample Household}} X\ 1000$$

Annual hospitalised Rate: this gives an estimate of number of persons who had been hospitalised during the last one year prior to the survey per thousand populations.

Measures of old Age:

Bickel's gives the idea for explaining methodologies of population aged. It can be given in two points. Rosset, E. (1964)[78]

- The increasing proportion of the aged is the effect of the progressive process of population ageing, independently of the trend in the birth rate and consequently of the proportion of children.

[77] Arokiasamy. P and Ghosh.S., (2009). "Morbidity in India Trends, Patterns and Differentials", *Journal of Health Studies,* pp, 129-140.

[78] Rosset, E., (1964). "Aging Process of Population", New York, A Pergamon Press Book, , pp 12-13.

- The increasing birth rate and the growing number of children in society exert an influences on the composition of the whole population by the age and thus on the proportion of old person.

W. Bickel introduces two measures of old age. One is the absolute number of old persons which is reflecting absolute population ageing. The second is the proportion of old persons thus; in both the cases, the number of aged persons is decisive in the ageing process.

1.10. (A) Coefficient of old age:

This measure of old age most frequently used in the ratio of the aged to the whole population. The formula for computing the coefficient of old age varies with the year of life taken as the beginning of old age. If the beginning of old age is at 60 year the formula for computing the coefficient of old age is:

$$W_{60} = İ_{60}+ /L*100$$

Where,

- W_{60} is the coefficient of the population.
- $İ_{60}+$ is the number of people of 60 and over.
- L is the total population.

The coefficient of old age assumes the role of a fundamental characteristic of the age of the society.

1.10. (B) Age Dependency Ratio:

Karol Bollod presented the concept of dependency ratio of population in his Handbook of Statistics (Rasset, 1964.) Demographers use three ratios of dependency.

- The ratio of dependency of children,
- The ratio of dependency of old people and
- The total ratio of dependency (old + children)

The old-age dependency ratio is defined as the ratio of the population aged 60 years and older persons to the working population in the 15-59 years age bracket. This also exhibits the changing age structure of the population in relation to the young and old dependency ratio.

$$R_I = N_{60+} / N_{15\text{-}59} * 100$$

Where,

- R_I is the ratio of dependency of old people.
- N_{60+} is the number of the aged people aged sixty over.
- $N_{15\text{-}59}$ is the number of the productive age group.

1.10. (C) Index of Ageing: Index of ageing is defined as the ratio of population above 60 years of age to children in the ages 0-14 age group in the population age structure. The index of ageing confirms to the Indian ageing phenomena to be more serious in the future. As per the index, the ageing process was much slower in India during 1961-1991, but is expected to pick faster within next 30 years resulting is an index of 34.3 by the year of 2021**(Rajan, S.I. and Mishra, U.S, 1999)[79].**

This is an important aspect as it is concerned with the actual measurement of ageing. **Basu, A and Basu, K., (1987)[80]** have given the concepts and measurement concerning demographic ageing. Illustrations of the measure suggested by them have been used for India and Japan for the period 1980-2025. Later on, this model was evaluated by **P.M Kulkarni (1988)[81]** who has suggested some modifications while explaining the ageing process for Japan and India.

1.11. Study area:

The Uttar Pradesh is India's fifth largest and most populous state, located in the northern part of the country, situated between 23°52'N and 31°28'N latitudes and 77°3' and 84°39'E longitudes covering about 9 per cent of the country's total area.

The state is bound on the north by Tibet and Nepal, on the north-west by Himachal Pradesh, on the west by Haryana, Delhi and Rajasthan, on the south by Madhya Pradesh, and on the east by Bihar. Physiographically, the state is bounded by the Himalayas and the Siwalik Hills in the north, the vast Gangetic plains in the centre and the Vindhya Range and

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[79] Rajan, S.I. and Mishra, U.S, (1999). "*India's Elderly Burden or Challenge*", New Delhi: Sage Publication, pp.30-32.

[80] Basu, Alka. And Basu, Kaushik,., (1987). "The Greying of Population: Concept and Measurement", *Demography*, Vol, 16, pp, 79-89.

[81] Kulkarni, P.M., (1988). "Measures of Ageing: A Proposed Amendment", *Demography.* Vol, 17, No.2, pp.257-264.

plateau on the south. Lucknow is the capital of Uttar Pradesh. It is situated along the banks of the Gomati River in the heart of the Uttar Pradesh. For the region-wise analysis all the districts of Uttar Pradesh complied and classified into five regions have been categories. This follows as:

- **NORTHERN UPPER GANGA PLAINS:** SAHARANPUR, JYOTIBA PHULE NAGAR PHULE NAGAR, MUZAFFARNAGAR, MEERUT, BIJNOR, BAGHPAT, MORADABAD, GHAZIABAD, RAMPUR, G. BUDDHA NAGAR. (10)

- **CENTRAL REGION:** SITAPUR, KANPUR DEHAT, HARDOI, KANPUR NAGAR, UNNAO, FATEHPUR, LUCKNOW, BARABANKI, RAE BARELI. (9)

- **EASTERN REGION:** PRATAPGARH, GORAKHPUR, KAUSHAMBI, KUSHINAGAR, ALLAHABAD, DEORIA, FAIZABAD, AZAMGARH, AMBEDKAR NAGAR, MAU, SULTANPUR, BALLIA, BAHRAICH, JAUNPUR, SHRAWASTI GHAZIPUR, BALRAMPUR, CHANDAULI, GONDA, VARANASI, SIDDHARTHA NAGAR, SANT RAVIDAS NAGAR, BASTI, MIRZAPUR, SANT KABIR NAGAR, SONBHADRA, MAHARAJGAN.(27)

- **SOUTHERN REGION:** JALAUN, MAHOBA, JHANSI, BANDA, LALITPUR, CHITRAKOOT, HAMIRPUR. (7)

- **SOUTHERN UPPER GANGA PLAINS:** BULANDSHAHR, BAREILLY, ALIGARH, PILIBHIT, HATHRAS, SHAHJAHANPUR, MATHURA, KHERI, AGRA, FARRUKHABAD, FIROZABAD, KANNAUJ, ETAH, ETAWAH, MAINPURI, AURAIYA, BUDAUN. (17)

Elderly scenario in Uttar Pradesh:

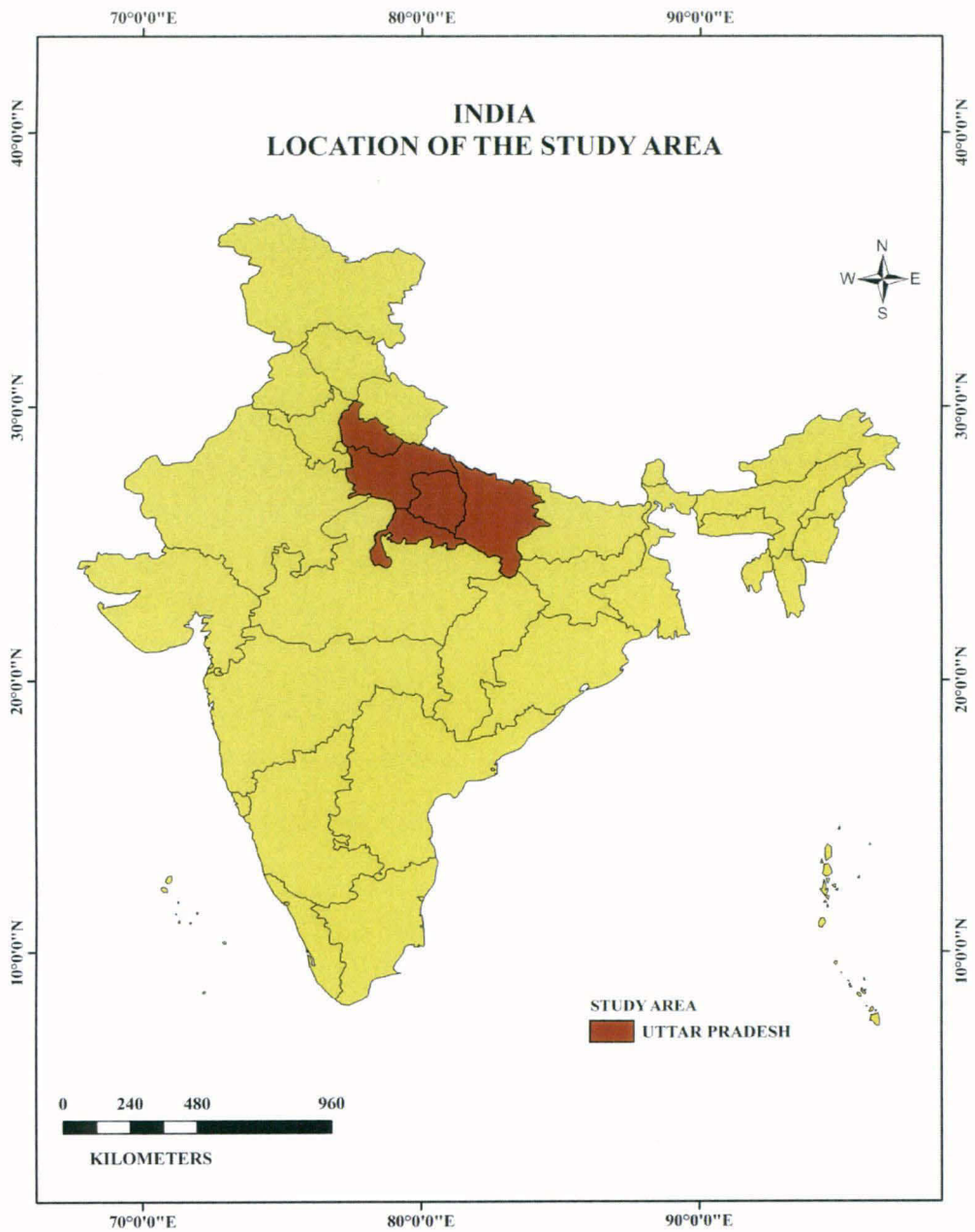
Uttar Pradesh is the fourth largest Indian state in terms of area (243290 km2) with the largest population in India. In 2001, the population of Uttar Pradesh was 166 million. The proportion of elderly persons in the population of India has increased from 5.63 per cent in 1961 to 6.58 per cent in 1991 and to 7.5 per cent in 2001.

At present Census of India 2001, elderly population constitutes the 7.01 percent of the total population of the Uttar Pradesh, which will be around 10.26 percent by the year 2026. Through the proportion of the elderly population in Uttar Pradesh is similar to Kerala. The

absolute number of elderly in Uttar Pradesh is expected to be thrice the size of Kerala in future.

Study Area:

Map: 1.1



I.12. Chapterisation:

Chapter one, focuses on the statement of the problems, Review of literature, Conceptual framework, objectives, research questions, sources of data, methodologies and study area. The review of literature mainly focuses upon the trends in population ageing, their socio-economic aspects and studies health, morbidity and nutritional status of elderly and care and support available to the elderly Population in India. **Chapter two** explains the demographic status of elderly in India and Uttar Pradesh. The topics mainly covered in this chapter are decadal growth of elderly population, regional variation of elderly population in Uttar Pradesh and state level analysis of elderly population in India, age-structure of elderly population and Index of Ageing.

Chapter three presents the socio-economic status of elderly population in India and Uttar Pradesh. This chapter is divided into two sections. The first section deals with the literacy rates of elderly, educational attainment of elderly by rural and urban residence in Uttar Pradesh, religious profile, marital status, sex ratio and the distribution of elderly population by caste (Scheduled Castes / Scheduled Tribes). Section two of chapter, focuses on the work participation rate of elderly population, distribution of workers (main and marginal), state of economic dependency among elderly and living arrangement.

Chapter four deals with the health condition and health care utilisation of elderly population in Uttar Pradesh, prevalence of nature of aliment, physical disability, sources of treatment, perception about current state of health, physical mobility of elderly, type of hospitals and whether treatment continued after discharge from hospital and in the last section. Try to emphasis on the relationship between demographic and socio-economic factors on the health status of elderly through binary logistic regression. **Chapter five** discussed the policies and various programmes for welfare of the elderly population. The last **chapter six** presents the summary and conclusions.

Chapter 2

Demographic Status of Elderly Population in India and Uttar Pradesh

Chapter: 2

Demographic Status of Elderly Population in India and Uttar Pradesh

This chapter presents the demographic status of elderly population in India and Uttar Pradesh. The first section presents the decadal variation of elderly population in India and Uttar Pradesh (1961-2001). Second section deals with the distribution of elderly population in India and Uttar Pradesh. The last section relates to the age structure and index of ageing in India and Uttar Pradesh.

2.1. Introduction:

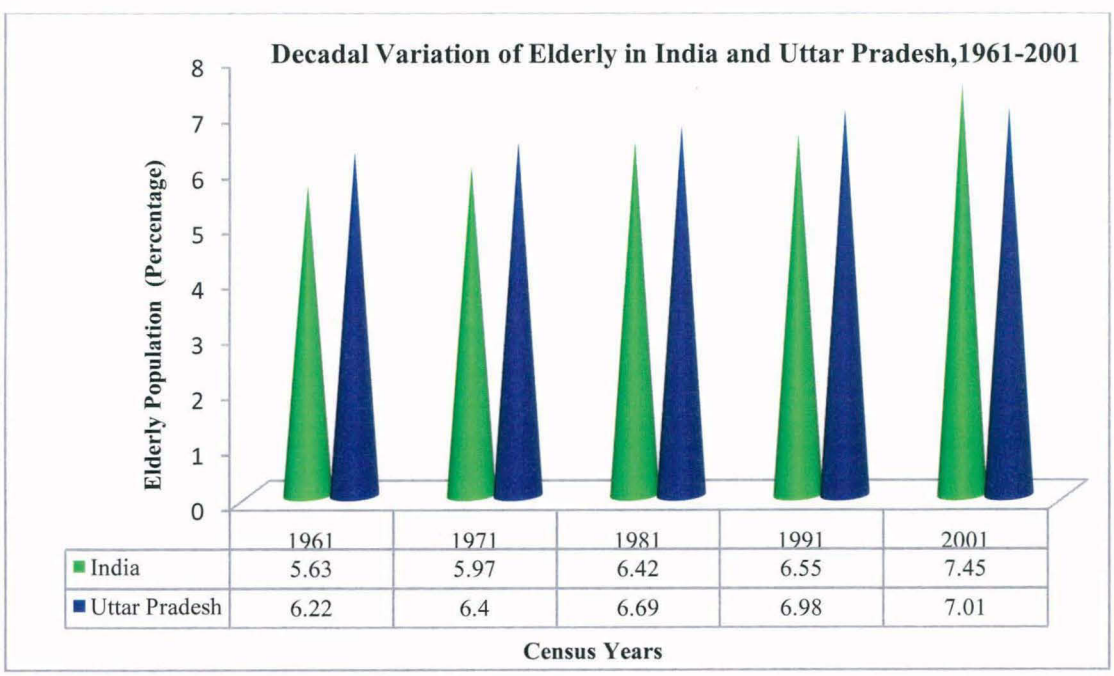
Old age is determined by cultural norms prevailing in society. In Indian society marriage of one's children, particularly of a son, heralds the beginning of old age for women far more clearly than do a specified number of years. One of the major features of demographic transition in the world has been the considerable increase in the absolute numbers of elderly people. The ageing process in India is faster than in other developing countries. Moreover, the transition from high to low fertility is expected to narrow the age structure and its base. The significant reduction in the death rates and improvements in the life expectancy have lead to more number of elderly in the country. The demographic change is increased longevity and an increased proportion of elderly among total population. The demographic trend reveals that the population growth is more rapid among older age groups in India and Uttar Pradesh. World population is growing at a rate of 1.7 percent per year, while the aged population is growing at a rate of 2.4 percent per year. India's elderly is expected to increase by 123 million by 2020 (S. Muthukrishnaveni, 2010). India represents the second largest elderly population in the world after China's. Ageing is emerging as an important area of action for the government and policy makers. Demographic scenario suggests that majority of the elderly population is found in the rural area. Increase in the number of aged cohort may be to attributed reduce death rates, improvement in life expectancy at birth and increase in average longevity due to rapid advancements in the field of medicine coupled with improved living standards. (Bhattacharya and Mukherjee, 2008) Provisional figure of Census of India 2011 indicates the population of the nation estimated to

be 1210.19 million having 51.54 percent males and 48.46 percent females. Uttar Pradesh stood at the top place being the most populous state in the country has largest share of population having 16.49 percent. Uttar Pradesh recorded about one-sixth population of the country. The percentage decadal growth of population has declined during 2001-11 compared to 1991-2001. In 1991-2001, this growth was 25.85 percent which declined to 20.09 percent in 2001-2011.

2.2 Decadal Variation of Elderly Population of India and Uttar Pradesh (1961-2001)

The pattern of population growth among elderly population at the national level with regard to different time periods has been discussed in this section. The decadal variation in the general population is compared with the elderly population and it is found that the elderly population has grown faster than the general population, mainly because of increase in the life expectancy of people that has been achieved through medical interventions. The continuously increasing proportions of elderly population for both the sexes indicate that the growth rate always remained faster than rest of the population in India and Uttar Pradesh. The share of elderly population in terms of absolute and percentage both is found more in the rural area.

Figure: 2.1



Sources: Census of India 1961-2001

Table: 2.1
Percentage Share of Elderly in Total Population in India and Uttar Pradesh 1961-2001

Years	Place of Residence	India			Uttar Pradesh		
		Total	Males	Females	Total	Males	Females
1961	Total	5.63	5.46	5.81	6.22	6.3	6.27
	Rural	5.82	5.71	5.95	6.2	6.45	6.44
	Urban	4.62	4.42	5.11	5.54	5.32	5.13
1971	Total	5.97	5.94	5.99	6.41	6.99	6.51
	Rural	6.54	6.26	6.17	6.92	7.24	6.69
	Urban	4.89	4.73	5.26	5.56	5.61	5.27
1981	Total	6.42	6.23	6.41	6.69	7.05	6.61
	Rural	7.03	7.55	6.85	7.02	7.41	6.87
	Urban	5.02	5.08	5.69	5.75	5.49	5.33
1991	Total	6.55	6.69	6.71	6.98	7.21	6.46
	Rural	7.51	7.21	7.03	7.4	7.65	6.79
	Urban	5.34	5.59	6.01	5.77	5.57	5.18
2001	Total	7.45	7.61	7.83	7.01	7.05	6.96
	Rural	7.74	7.43	8.06	7.31	7.41	7.20
	Urban	6.7	6.25	7.21	5.86	5.69	6.06

Sources: Census of India 1961-2001

Data in the table 2.1 presents the decadal variation of aged population in India and Uttar Pradesh during the decades of 1961-2001. Indian population has increased from 439.2 million in 1961 to 1.027 billion in 2001. Simultaneously, the number of older people has increased from 19 million (5.63 percent) to 77 million (7.5 percent) during the same time span (RGI). In absolute terms, the elderly people account for 53.47 million in 1991, 77 million in 2001(7.05 percent) and expected to be 124 million in 2020. One fourth of India's elderly persons live in south India due to the low fertility and high expectancy of life at birth in the region and is expected to reach 67 million in 2051. India now has the second largest aged population in the world. Although the India's elderly population is small compared with that of any developed country. In Uttar Pradesh, it is very large in terms of absolute numbers compared to other Indian states. The proportion of elderly population in Uttar Pradesh has increased with higher rates than in India. (1961-1999). During the last 40 years period (1961-2001), the proportion of elderly population in Uttar Pradesh has grown gradually from 6.22 percent in 1961 to 7.01 in 2001. The proportion of elderly population in the Uttar Pradesh is less compare to the national average in 2001.

The decadal growth of aged male population in India has increased from 5.46 percent in 1961 to 7.61 percent in 2001. While the proportion of aged females population has increased from 5.81 percent in 1961 to 7.83 percent in 2001.The proportion of older population was found higher in rural areas than in urban areas of the country during the decades of 1961-2001. In Uttar Pradesh, the percent of female elderly population has increased in every decade and grown at faster rate. It has increased from 6.27 percent in 1961 to 6.46 percent in 1991. In 2001, it was 6.96 percent which is higher than male elderly population for the same period in Uttar Pradesh.

Classification of Regions of Uttar Pradesh: 2001

MAP: 2.1

Table: 2.2 (A)
Proportion of Elderly Population in India and Uttar Pradesh by Sex and Residence: 2001

Area		Total	Male	Female
India	Total	7.45	7.80	7.83
	Rural	7.74	7.43	8.06
	Urban	6.70	6.25	7.21
Uttar Pradesh	Total	7.01	7.05	6.96
	Rural	7.31	7.41	7.20
	Urban	5.86	5.69	6.06

Table: 2.2 (B)
Regional Variations of Elderly Population in Uttar Pradesh: 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	6.59	6.63	6.55
	Rural	6.92	7.04	6.79
	Urban	5.91	5.78	6.05
Central Region	Total	7.60	7.53	7.68
	Rural	7.99	7.91	8.08
	Urban	6.55	6.50	6.60
Eastern Region	Total	7.98	8.28	7.67
	Rural	8.19	8.54	7.81
	Urban	6.46	6.39	6.53
Southern Region	Total	7.89	7.84	7.95
	Rural	8.15	8.21	8.08
	Urban	7.01	6.56	7.52
Southern Upper Ganga Plains	Total	6.92	7.78	7.08
	Rural	7.16	7.05	7.30
	Urban	6.13	5.91	6.39

Source: Census of India 2001. C- Series Social and Cultural Tables.

Note:
Northern Upper Ganga Plains: Saharanpur, J Phule Nagar, Muzaffarnagar, Meerut, Bijnor, Baghpat, Moradabad, Ghaziabad, Rampur, G. Buddha Nagar. (10)

Central Region: Sitapur, Kanpur Dehat, Hardoi, Kanpur Nagar, Unnao, Fatehpur, Lucknow , Barabanki, Rae Bareli. (9)

Eastern Region: Pratapgarh, Gorakhpur, Kaushambi, Kushinagar, Allahabad, Deoria, Faizabad, Azamgarh, Ambedkar Nagar, Mau, Sultanpur, Ballia, Bahraich, Jaunpur, Shrawasti Ghazipur, Balrampur, Chandauli, Gonda, Varanasi, Siddharth Nagar, S.R.Nagar(Bhadohi), Basti, Mirzapur, S. Kabir Nagar, Sonbhadra, Maharajgan.(27)

Southern Region: Jalaun, Mahoba, Jhansi, Banda, Lalitpur, Chitrakoot, Hamirpur. (7)
Southern Upper Ganga Plains: Bulandshahr, Bareilly, Aligarh, Pilibhit, Hathras, Shahjahanpur, Mathura, Kheri, Agra, Farrukhabad, Firozabad, Kannauj, Etah, Etawah, Mainpuri, Auraiya, Budaun. (17)

2.3. Distribution of Elderly Population in Uttar Pradesh: A Regional Analysis:

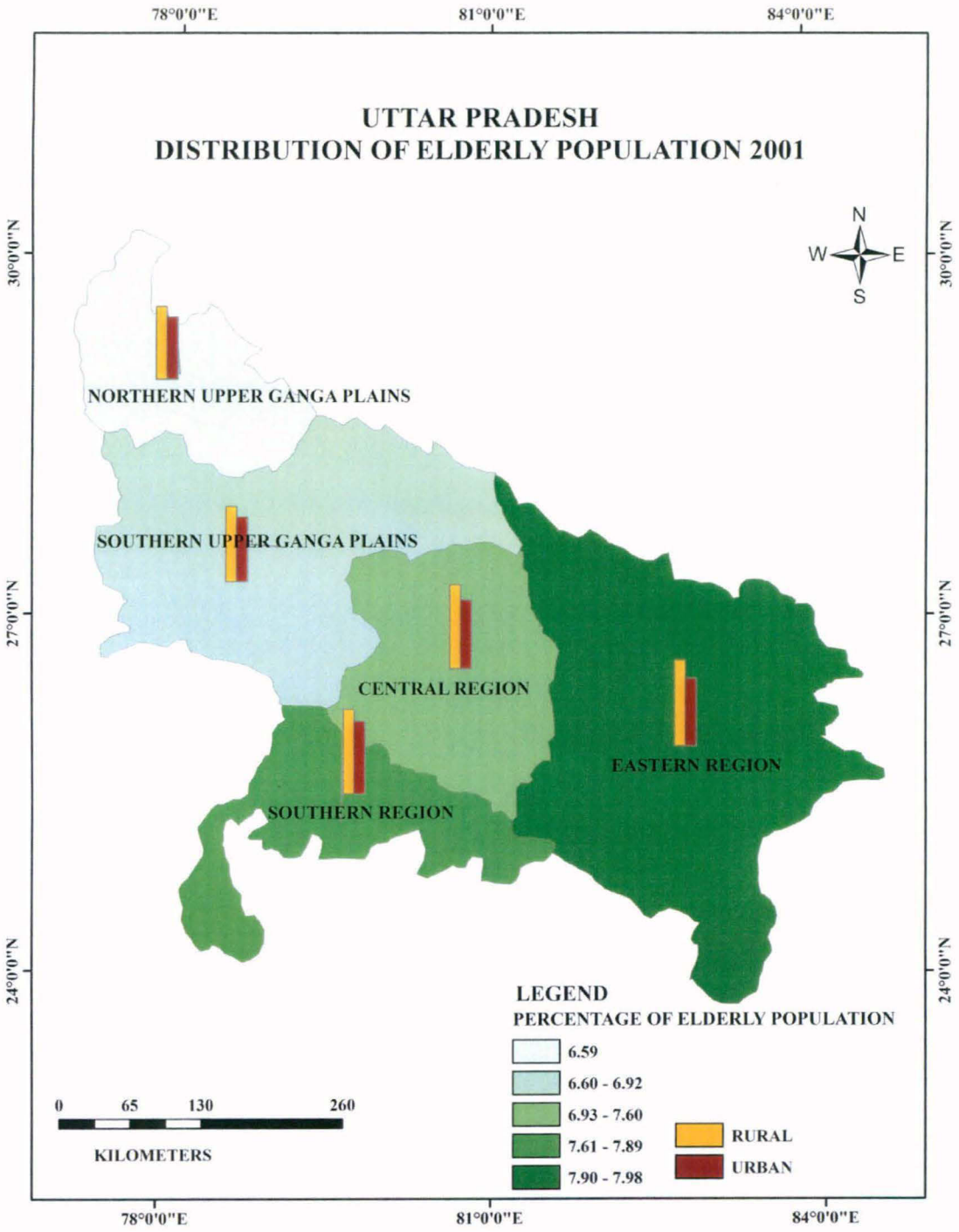
The data in the table, 2.2 (A) shows that the pattern of elderly population in the regions of Uttar Pradesh. The proportion of aged population in Uttar Pradesh is highest in terms of absolute number in the country. A comparative analysis shows that 7.31 percent of total rural population is aged whereas in the urban areas it is 5.86 percent. The elderly population is found in India 7.74 percent in rural and 6.70 percent urban areas. Sex-wise results indicate that the proportion of aged female population is higher in India as well as in Uttar Pradesh. This phenomenon among elderly population is of prime importance because female life expectancy at age 60 is slightly higher than that of males.

Regional-wise analysis shown in the table 2.2 (B) reflects that higher proportion of aged are found in Eastern region (7.98 percent), followed by Southern region (7.89 percent) and Central region (7.60 percent) and the lowest is observed in the Northern Upper Ganga Plains (6.59 percent). However, with regard to the proportions of rural aged people, the highest percentage is reported in Eastern region having 8.19 percent, followed by southern region 8.15 percent and central region having 7.91 percent. The proportion of urban aged population is highest in southern region (7.01 percent), followed by Eastern region (6.46 percent) and Central region (6.55 percent). Regional distribution of elderly population in Uttar Pradesh indicates proportions of aged male population are quite higher than females in Uttar Pradesh.

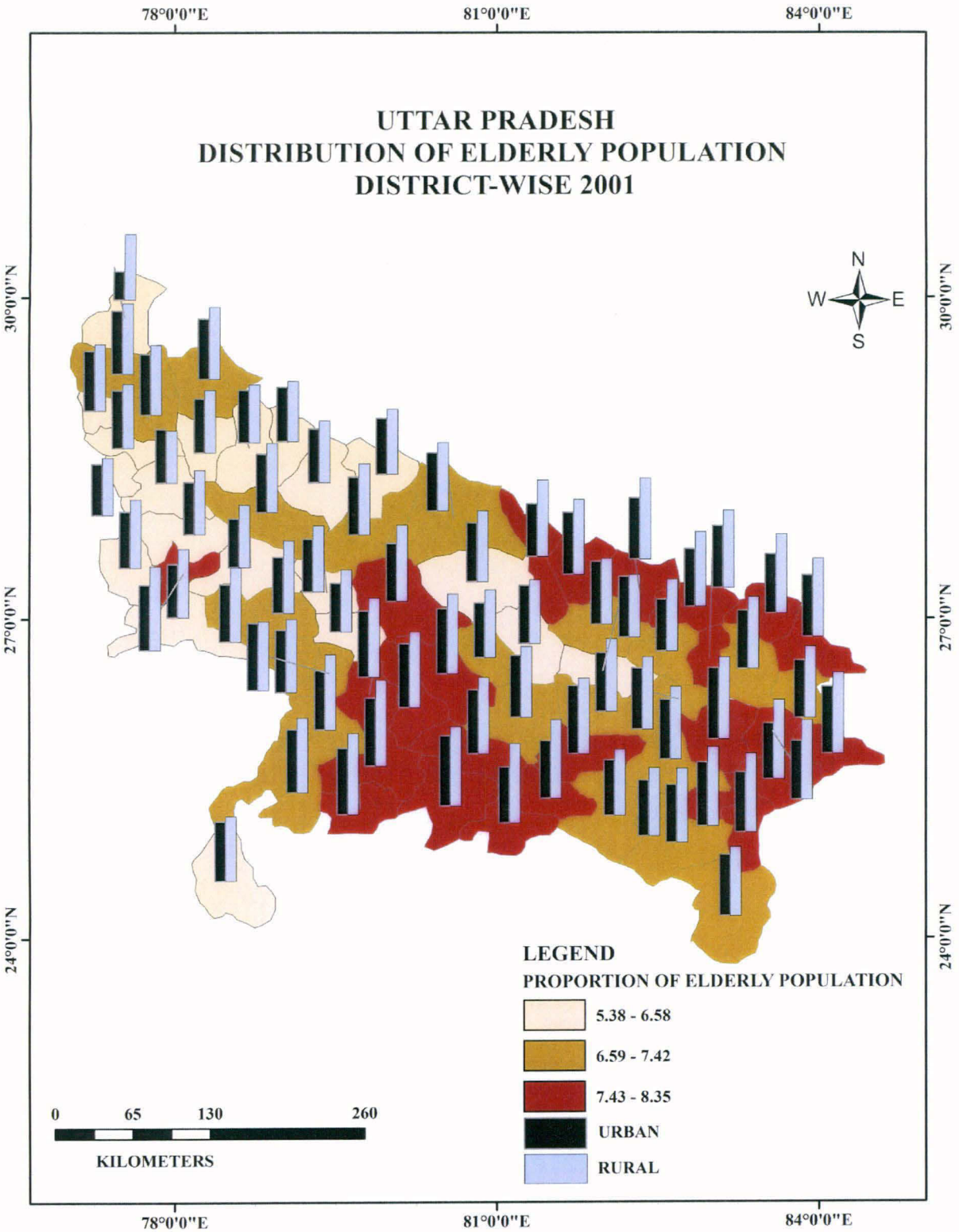
In the districts of Northern Upper Ganga region, the percentage of elderly is highest in the Baghpat district (8.18 percent) and lowest in Rampur (5.38 percent). The highest percentage of elderly have been found in rural areas (8.55 percent) compared to in urban areas (6.44 percent). The Central region mainly comprises the districts of Sitapur, Kanpur Dehat, Hardoi, Kanpur Nagar, Unnao, Fatehpur, Lucknow, Barabanki and Rae Bareli. The data indicates the proportion of female aged population is found to be higher than males in the entire region. In Eastern region the distribution of aged population indicates that the highest percentage of elderly is found in Ballia (8.27 percent), Deoria (8.14 percent), Ghazipur, (7.98 percent) and Gorakhpur (7.63 percent). The proportion of elderly population

in rural areas is found significantly higher (8.19 percent) as compared to urban areas (6.46 percent) mainly because of migration of younger age group from rural to urban areas. In southern region of the state, there is higher proportion of aged female population than males.

MAP:2.2



MAP:2.3


78°0'0"E
81°0'0"E
84°0'0"E
UTTAR PRADESH
DISTRIBUTION OF ELDERLY POPULATION
DISTRICT-WISE 2001
30°0'0"N
27°0'0"N
24°0'0"N
N
W
E
S
LEGEND
PROPORTION OF ELDERLY POPULATION
5.38 - 6.58
6.59 - 7.42
7.43 - 8.35
URBAN
RURAL
0
65
130
260
KILOMETERS

2.4. Distribution of Elderly Population in India: A State Level Analysis:

According to Census of India 2001, 7.45 percent of elderly population live in India. The proportion of aged population in rural areas is found to be significantly higher (7.44 percent) as compared to urban areas (6.70 percent) mainly because of greater urbanisation and the out-migration of the young generation in search for jobs economic stability.

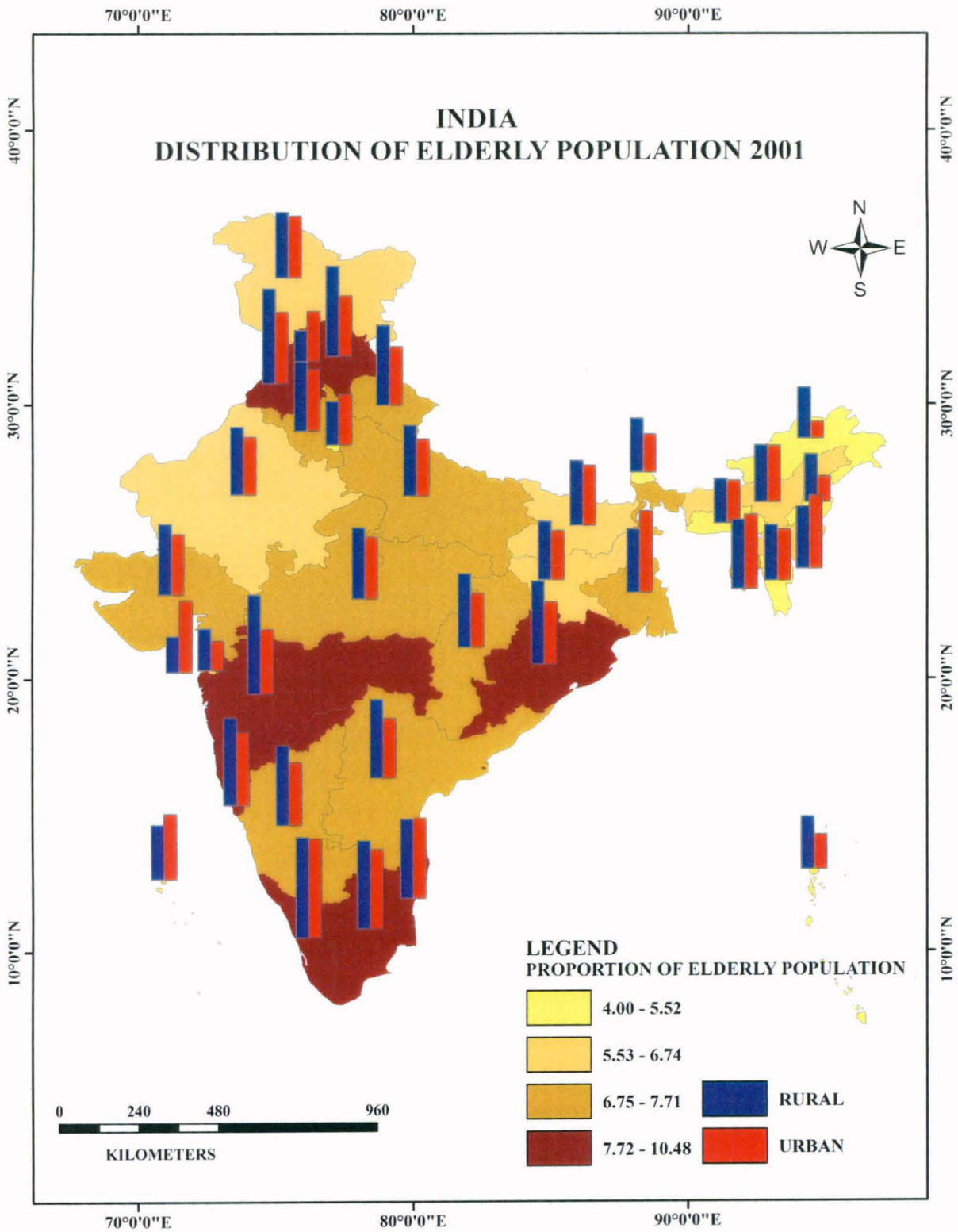
Map 2.4 shows the state-wise variation in the proportions of elderly population for both the sexes in 2001. The highest percentage of elderly population is found in the Kerala (10.48 percent), followed by Himachal Pradesh (9.01 percent), Punjab (9.00 percent), Maharashtra (7.3 percent), Tamil Nadu (8.33 percent), Pondicherry 8.31 percent and Orissa (8.26 percent). The higher proportions of the aged in the south Indian states are mainly the outcome of its low fertility level and higher expectancy of life at birth for both the sexes.

The states of Punjab, Maharashtra, Orissa, Karnataka and Andhra Pradesh also exhibit relatively higher level of demographic transitions. It is observed that North-Eastern part of the country have lowest percentage of aged population. Andaman and Nicobar Islands (4.88 percent), Daman & Diu (5.08 percent) and Chandigarh (4.99 percent) indicate less than 5 percentage of aged population. The proportion of aged female population is found to be quite higher than male elderly population in most of the districts of India. The maximum percentage of female aged population is found in Kerala (10.52 percent) followed by Maharashtra (10.24 percent), Punjab (9.82 percent) and Himachal Pradesh (9.31 percent). The Union Territories of Chandigarh, Daman and Diu report less than 4 percent aged population due to female's higher life expectancy. It is slightly higher than that of males in India.

Rural-Urban Distribution of Elderly Population in India:

India now has the second largest aged population in the world. The rural- urban distribution of the elderly in India reveals that about two thirds of the elderly live in the rural areas. A majority of elderly in rural area depends on agriculture for their sources of income. More rural aged population is found especially in Himachal Pradesh (9.31percent), Maharashtra (10.24 percent), Uttar Pradesh (7.31 percent), Punjab (9.82 percent) and Kerala (10.52 percent). Females constitute a slightly higher proportion than male basically due to higher female life expectancy at birth.

MAP: 2.4


INDIA
DISTRIBUTION OF ELDERLY POPULATION 2001
70°0'0"E
80°0'0"E
90°0'0"E
40°0'0"N
30°0'0"N
20°0'0"N
10°0'0"N
N
W
E
S
LEGEND
PROPORTION OF ELDERLY POPULATION
4.00 - 5.52
5.53 - 6.74
6.75 - 7.71
7.72 - 10.48
RURAL
URBAN
0
240
480
960
KILOMETERS

Distribution of aged population in urban areas show that most of the urban elderly population in India is found in the states like, Manipur (7.54 percent), West Bengal (8.44 percent), Tripura (7.70 percent), Goa (7.58 percent), Kerala (10.36 percent), Tamil Nadu (8.31 percent) and Pondicherry (8.35 percent). Over the last 20 years, the share of rural older people has been increasing steadily.

Table: 2.3

Age Structure of Aged Population in India and Uttar Pradesh: 2001

Total	India			Uttar Pradesh		
Age -Groups	Total	Males	Females	Total	Males	Females
60-69	4.60	4.33	4.89	4.33	4.26	4.41
70-79	2.07	2.03	2.11	1.92	2.00	1.82
80-89	0.61	0.58	0.64	0.58	0.60	0.55
90-99	0.16	0.15	0.18	0.17	0.17	0.16
100+	0.02	0.02	0.02	0.02	0.01	0.02
Rural						
Age -Groups	Total	Males	Females	Total	Males	Females
60-69	4.78	4.51	5.06	4.51	4.46	4.57
70-79	2.15	2.14	2.16	2.00	2.11	1.88
80-89	0.63	0.61	0.64	0.60	0.64	0.56
90-99	0.17	0.16	0.18	0.17	0.18	0.17
100+	0.02	0.01	0.01	0.02	0.02	0.02
Urban						
Age -Groups	Total	Males	Females	Total	Males	Females
60-69	4.14	3.88	4.44	3.64	3.50	3.80
70-79	1.85	1.75	1.97	1.59	1.57	1.60
80-89	0.55	0.49	0.62	0.48	0.47	0.49
90-99	0.15	0.12	0.17	0.14	0.14	0.15
100+	0.010	0.006	0.015	0.01	0.01	0.02

Source: Census of India, 2001 C- Series Social and Cultural Tables

2.5 Age-Structure of Elderly Population in India and Uttar Pradesh: 2001

The demographic trend reveals that the population growth is more rapid among the older age groups in India. The 'young-elderly' (60 to 69 years) population in India (4.60 percent) is slightly higher than Uttar Pradesh (4.33 percent). Table 2.3 indicates that female aged population in India (4.89 percent) is higher than males (4.33 percent). The same

phenomenon is in the Uttar Pradesh where females stand for (4.41 percent) and males (4.26 percent).

The elderly population in the age group of 60-69 years is higher in rural areas than urban areas in India as well as in Uttar Pradesh. In the category of 'middle aged elderly' (between 70-79 years), the elderly population in India is slightly higher (2.70 percent) than Uttar Pradesh (1.92 percent).

This ratio is quite higher in rural area than urban area. In the category of oldest-old age (80+) has increased in India as well as Uttar Pradesh. It is expected to grow faster than any other age group of the population.

2.6 Proportion of Index of Ageing in India and Uttar Pradesh: 2001

Table: 2.4 (A)

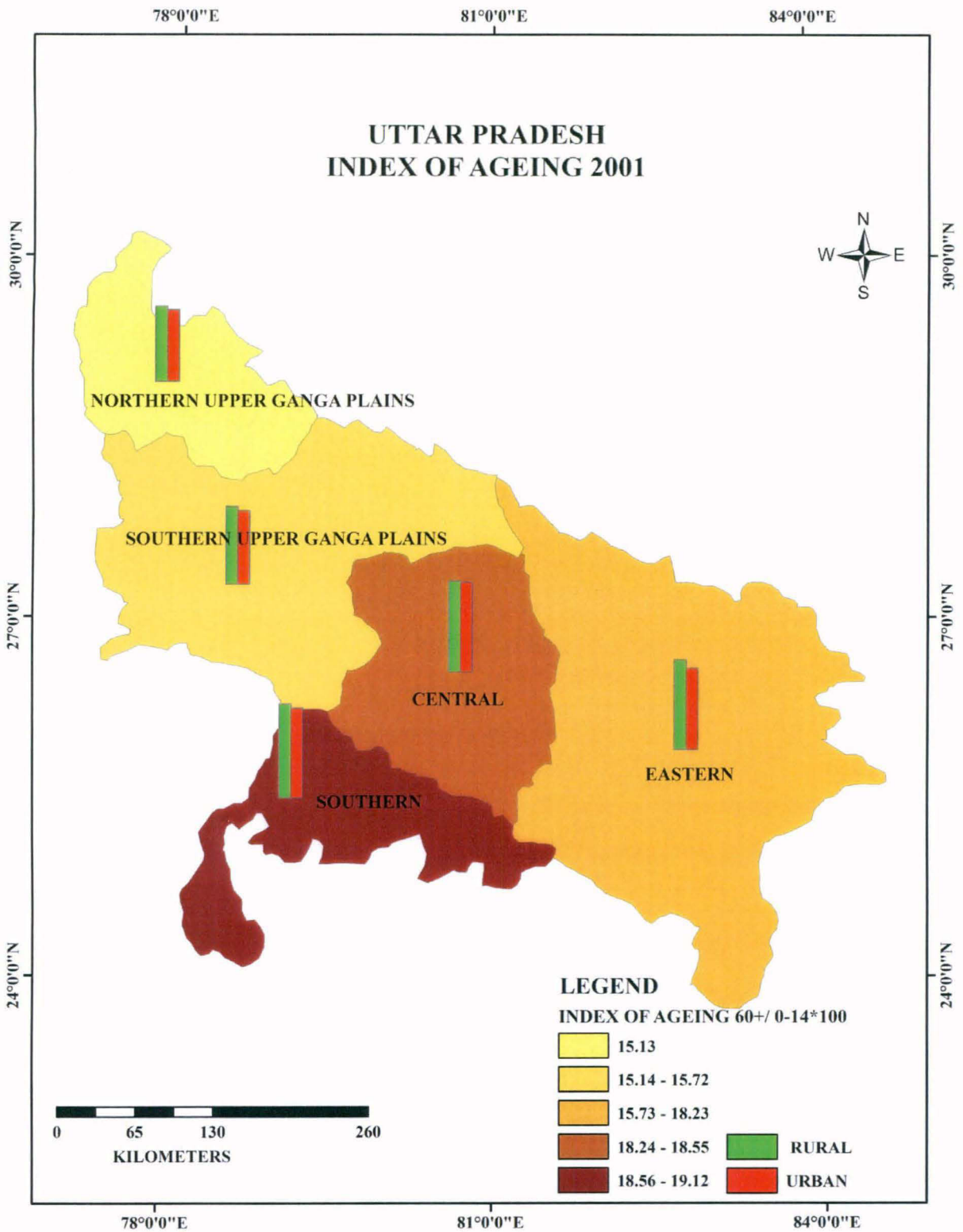
Index of Ageing by Sex and Residence of India and Uttar Pradesh: 2001

Area		Total	Male	Female
India	Total	19.84	18.72	20.07
	Rural	19.65	18.60	20.81
	Urban	20.43	19.11	21.89
Uttar Pradesh	Total	17.25	17.29	17.19
	Rural	17.50	17.63	17.36
	Urban	16.14	15.85	16.46

Data in the table 2.4(A) presents the index of ageing in India and Uttar Pradesh. In Uttar Pradesh index of ageing[1] is observed below the national level. In urban areas, it is reported 20.43 percent and 19.65 percent in rural areas of the country. Sex-wise index of ageing is higher for females than males in India. But in Uttar Pradesh the index of ageing among males (17.29 percent) is found to be higher than females (17.19 Percent). This ratio (17.50 percent) in rural areas is slightly higher than in urban areas (16.14 percent).

[1] **Note:** Index of ageing which is defined as the ratio of the population aged 60 years and above per 100 of population aged 0-14 years.

MAP: 2.5


78°0'0"E
81°0'0"E
84°0'0"E
UTTAR PRADESH
INDEX OF AGEING 2001
30°0'0"N
27°0'0"N
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N
W
E
S
NORTHERN UPPER GANGA PLAINS
SOUTHERN UPPER GANGA PLAINS
CENTRAL
EASTERN
SOUTHERN
LEGEND
INDEX OF AGEING 60+/ 0-14*100
15.13
15.14 - 15.72
15.73 - 18.23
18.24 - 18.55
18.56 - 19.12
RURAL
URBAN
0
65
130
260
KILOMETERS

Table: 2.4 (B)

Region Wise Index of Ageing in Uttar Pradesh: 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	15.13	15.21	15.04
	Rural	15.34	15.58	15.05
	Urban	14.67	14.36	15.03
Central Region	Total	18.55	18.48	18.63
	Rural	18.61	18.50	18.73
	Urban	18.36	18.41	18.31
Eastern Region	Total	18.23	18.57	17.87
	Rural	18.42	18.78	18.02
	Urban	16.65	16.71	16.58
Southern Region	Total	19.12	19.05	19.21
	Rural	19.29	19.49	19.07
	Urban	18.47	17.35	19.75
Southern Upper Ganga Plains	Total	15.72	15.43	16.07
	Rural	15.90	15.68	16.16
	Urban	15.08	14.50	15.74

Source: Census of India, 2001 C- Series Social and Cultural tables C-13

The regional distribution of index of ageing shown in table 2.4 (B) points out that the Southern region of the state Uttar Pradesh higher proportions of index of ageing which is 19.12 percent, followed by the Central region (18.55 percent) and the Eastern region (18.23 percent). However, Northern Upper Ganga plains represent the lowest index of ageing (15.23 percent) in the Uttar Pradesh. Rural-urban distribution of index of ageing among elderly population shows higher proportion in rural area than urban areas in all the regions. The highest index of ageing in rural areas is found in the Southern region (19.29 percent) while lowest value of index of ageing is observed in Northern Upper Ganga plains (15.34 percent). Sex- wise differential in the index of ageing shares higher value for females than males for all the region of the state. The higher index value for females is found in southern region (19.21 percent), followed by the Central region (18.63 percent) and the Eastern region (17.87 percent). The lowest share of index of ageing among females is reported in the Northern Upper Ganga plains (15.04 percent).

Index of ageing is much lower in developing countries than in the developed world. Older people are likely to become more vulnerable in the absence of familial support network hence they need a strong social security system. The increasing number of elderly persons will have a direct impact on the demand for health services.

2 .7. Conclusion:

This chapter presents the demographic situation of elderly population in India and Uttar Pradesh. Ageing follows directly from demographic transition which is linked with social and economic development. In a country like India, aged people suffer from more problems than developed countries. Today India is having second largest aged population after China in the world. Elderly population, in India and Uttar Pradesh are predominantly based in rural areas, as 70 percent of India's population live in the rural areas. In Uttar Pradesh, the absolute size of aged population is found highest among the Indian states. Proportions of aged female are higher than males in India as well as in Uttar Pradesh due to the longer life expectancy at birth in favour of females. The number of elderly, both in absolute and percentage term, is larger in the rural areas of Indian and Uttar Pradesh than in urban areas.

Chapter 3

Socio-Economic Status of Elderly Population in India and Uttar Pradesh

Chapter: 3

Socio-Economic Status of Elderly Population in India and Uttar Pradesh

This chapter presents the socio-economic status of elderly in India and Uttar Pradesh. First section provides the social status of elderly including literacy rate, marital status, religious profile, social groups (SC/ST) and sex ratio among elderly. Second section deals with the dependency ratio, main and marginal workers, state of economic dependence and living arrangement of elderly population in India and Uttar Pradesh.

3.1.1. Introduction:

The well being of elderly depends largely on certain socio-economic condition such as: labour force participation, literacy, marital status and state of economic independence. Socio-economic developments affect vital rates over a time period and bring about the phenomenon of demographic transition. India is a vast country, with widely heterogeneous population in terms of socio-cultural and economic characteristics like literacy, employment, health, morbidity rates and social amenities. Old age and wisdom are considered synonymous in the traditional agrarian Indian culture. Old age is determined by the cultural norms prevailing in society. In the Indian society, marriage of one's children, particularly of a son, heralds the beginning of old age. (Sati, P.N., 1996)[1] In most of the developed world, population ageing was a gradual process of steady socio-economic growth. Income is the most widely used measure of socio-economic status of elderly.

The level of socio-economic development in rural area of Uttar Pradesh is much lower compared to India as a whole. Being an agrarian country elderly in India mainly engage themselves in the agriculture sector as self-employed. As there is no age limit for superannuation, people continued to work even after the age of 60 years. Out-migration of younger generation members might have been a major factor pushing elderly people to seek income by participating in the workforce. The higher percentage for women may reflect the higher level of poverty especially in rural areas. Social security system has become major element of social development in the country which has important effects on well-being of

[1] Sati, P.N., (1996). "Needs and Problems of Aged", New Delhi: Himanshu Publication, pp,5-6

the older age groups in the society. A new challenge in India is the small family's ability to meet the economic demands for older parents.

Table: 3.1

Indicators of Socio-Economic Development in India and Uttar Pradesh

	Indicators	India	Uttar Pradesh
1	Total population 2001 (in millions)*	102.86	16.62
2	Crude Birth Rate (2009)**	23.1	22.5
3	Crude Death Rate (2009)**	7.4	7.3
4	Total Fertility Rate (2008)**	2.6	3.8
5	Infant Mortality Rate (2008)**	55	69
6	Sex Ratio (2001)*	933	898
7	Schedule Caste population 2001 (in millions)*	166.44	35.15
8	Schedule Tribe population 2001(in million)*	84.33	10.79
9	Female Literacy Rates (2001) *	53.7	42.2
10	Population Density 2001*(per. sq. km.)	324	589
11	Main Workers 2001 (in millions)*	313	39.3
12	Marginal Workers 2001 (in millions)*	89.2	14.6
13	Work Participation Rates (2001)*	39.10	34.48

Source: * Census of India
**Sample Registration System (SRS)

3.1.2. Indicators of Socio-Economic Development in India and Uttar Pradesh

Uttar Pradesh is far behind most of the States of the India in terms of the major indicators of social- economic development such as sex ratio, literacy and Population density maternal mortality and infant mortality rates. The proportion of elderly is the result of steady decline in the fertility as well as mortality rates. Life expectancy at birth increased from 49.7 years over the period of 1970-1975 to 63 years during 2000-2004 in India.

The life expectancy at birth is an important indicator of quality of life Crude birth rate (CBR) of Uttar Pradesh fell from 36.3 percent in 1971 to 22.5 percent in 2009, while Crude death rate (CDR) declined from 15.9 percent in 1971 to 7.3 percent in 2009. Total fertility rate (TFR) of Uttar Pradesh has declined from 5.2 percent in 1971 to 3.8 percent in 2008. Census of India (2001) has recorded 313 million 'Main Workers' 89.2 million 'Marginal

Workers' in the country. While the proportion of workers fall from 39.3 million for Main Workers and 14.6 million for Marginal Workers in Uttar Pradesh.

3.1.3 Literacy- Definition: The United Nations has defined literacy as the ability of a person to read and write with understanding a short simple statement in his everyday life. From 1901 onwards, the population was dichotomously classified into as literate and illiterate. From 1931 onwards, the definition of literacy was more or less uniform. According to 1971 Census, a person aged 7 and above who can both read and write with understanding in any language is to be taken as literate.

$$\text{Literacy Rate} = \frac{\text{The Number of literate Persons Aged 7 +}}{\text{Population Aged 7 +}} \text{ X 100}$$

Table: 3.2 (A)

Literacy Rates of Elderly Population in India and Uttar Pradesh, 2001

Area		Total	Male	Female
India	Total	36.31	52.83	20.25
	Rural	29.05	45.49	13.01
	Urban	58.08	74.98	41.8
Uttar Pradesh	Total	28.46	42.54	12.58
	Rural	24.18	38.13	8.26
	Urban	48.81	64.11	32.41

Source: Census of India 2001, C- Series Social and Cultural Tables

Data in the table 3.2(A) indicates the pattern of literacy rate among elderly population in India and Uttar Pradesh. Literacy rate in the population within the age group of 7 years and above as per Census 2001 at national level is 64.8. The male and female literacy rates are 75.3 and 53.7 percent respectively in 2001. Literacy rate of elderly population in India is 36.31 percent and in Uttar Pradesh it is 28.46 percent. It is 52.83 percent for males while 20.25 percent for females in India. Literacy rate for male and females in Uttar Pradesh are 42.54 percent and 12.58 percent respectively in 2001. Literacy rate for elderly females are lower than males for both India and Uttar Pradesh. Literacy rates for elders is higher in urban areas (58.08 percent) compared to rural areas 29.05 percent of India. Similar trends of literacy rate are observed in case of Uttar Pradesh where urban elders are more literate (48.81 percent) than their rural counterparts (24.18 percent).

Table: 3.2 (B)
Region-Wise Literacy Rates of Elderly Population in Uttar Pradesh: 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	36.31	52.83	20.25
	Rural	29.05	45.49	13.01
	Urban	58.08	74.98	41.80
Central Region	Total	31.70	45.71	16.30
	Rural	24.38	38.34	9.02
	Urban	56.55	70.77	31.44
Eastern Region	Total	26.74	41.04	10.42
	Rural	24.17	38.23	8.07
	Urban	50.85	67.99	26.68
Southern Region	Total	29.39	45.03	11.67
	Rural	25.13	40.16	7.49
	Urban	46.87	66.79	29.45
Southern Upper Ganga Plains	Total	29.34	43.72	13.41
	Rural	24.99	39.33	8.84
	Urban	46.16	61.34	29.31

Source: Census of India 2001. C- Series Social and Cultural Tables.

The regional variations in literacy have been shown in the table 3.2 (B). The Central region reported a highest literacy rate of 31.70 percent, followed by Southern region (29.39 percent), Southern Upper Ganga Plains (29.34 percent) and Northern Upper Ganga Plain (28.16 percent). Eastern region with 26.74 percent represents the lowest literacy rate for the aged people in Uttar Pradesh. The facilities for education and schooling are low in Uttar Pradesh mainly in rural areas because more than 70 percent of population lives in rural areas. As a result of that the level of literacy among the aged also remains low. A comparison of the literacy level of the aged with the general population shows the elderly are lagging behind. The literacy rate among aged is more in urban areas than rural areas in all regions of the states. Higher literacy rate is found in the elderly population of urban area compare to rural counterparts in all the regions. Urban areas of Central region reported higher literacy rate among aged, while Northern Upper Ganga Plains reported lowest (42.96 percent) literacy rate for elderly population in the Uttar Pradesh. A significant sex differential in literacy rate is observed among aged population in Uttar Pradesh. The Literacy rate for males is higher than females in all the regions.

3.1.4. Educational attainment: One of the important indicators of social development is the level of literacy and educational attainment of the people. It is considered as an important factor in the process of modernisation. Education is an important variable affecting demographic behaviour of population concerning marriage, fertility, mortality, migration as well as participation in the labour force.

Table: 3.3

Educational Attainment of Elderly by Rural and Urban in Uttar Pradesh, 2001

Educational Attainment	Total	Rural	Urban
Total	7.45	7.76	6.28
Illiterate	9.61	9.96	7.73
Literate	4.87	4.72	5.28
Literate without educational level	16.09	16.39	14.89
Below Primary	3.40	3.43	3.29
Primary	5.51	5.41	5.85
Middle	4.06	3.83	4.77
Educational Level Matric/ Secondary	4.67	4.21	5.59
Higher secondary/Intermediate Pre-University/Senior secondary	3.62	3.13	4.38
Non-technical diploma or certificate not equal to degree	9.61	9.22	9.91
Technical diploma or Certificate / not equal to degree	7.64	7.43	7.81
Graduate & above	4.87	3.71	5.66
Unclassified	5.17	4.73	5.71

Source: Census of India, 2001 C-Series Social and Cultural Tables

The data in the table 3.3 shows that educational attainment of the elderly population in Uttar Pradesh. Literate constitutes 4.87 percent of the elderly population in Uttar Pradesh. The level of Literacy for the aged in urban areas is 5.28 percent which higher than rural areas (4.72 percent). Most of the elderly people falls in the category of literate without educational level 16.09 percent and the people from rural areas are having constituting 16.39 percent, and urban areas are 14.89 percent.

The elderly urban population is found to be more literate than the rural elderly. In rural areas the elderly people constitutes only 3.71 percent in the category of graduate and above. With regard to urban areas within the age group of elderly people, they represent higher level of literacy as compared to the rural areas. Thus, the literacy levels among elderly person are low or extremely low in rural areas because of poverty and patriarchal mind setup towards women.

3.1.5. Religious profile of Elderly Population:

India is multi religious and multi cultural society where many religions have flourished for thousands of years. While Hindus form the majority community from time immemorial and

Muslims, Sikhs, Buddhists, Jains, Christians and other communities have been in the country for a very long time (Premi, M.K. 2001).[2]

Table: 3.4
Elderly Population by Religious Communities in Uttar Pradesh and India 2001

Religion		India			Uttar Pradesh		
		Total	Male	Female	Total	Male	Female
Hindus	Total	7.90	7.54	8.30	7.74	7.80	7.67
	Rural	8.17	7.85	8.50	7.97	8.09	7.84
	Urban	7.17	6.69	7.70	6.61	6.42	6.83
Muslims	Total	5.99	5.84	6.16	6.10	6.16	6.04
	Rural	6.19	6.09	6.30	6.46	6.58	6.33
	Urban	5.63	5.39	5.90	5.46	5.41	5.52
Christians	Total	8.55	8.22	8.87	7.98	7.93	8.03
	Rural	8.59	8.34	8.84	7.84	8.09	7.58
	Urban	8.47	7.99	8.94	8.08	7.80	8.37
Sikhs	Total	10.12	9.90	10.37	9.66	9.76	9.56
	Rural	10.52	10.29	10.78	9.67	9.88	9.44
	Urban	9.02	8.82	9.24	9.64	9.49	9.81
Buddhists	Total	8.62	7.90	9.38	7.88	7.94	7.81
	Rural	10.18	9.42	10.97	8.12	8.20	8.03
	Urban	6.14	5.50	6.82	6.36	6.35	6.36
Jains	Total	10.17	9.46	10.92	9.26	8.87	9.70
	Rural	11.67	10.73	12.68	10.01	9.83	10.21
	Urban	9.70	9.06	10.37	9.14	8.70	9.61
Others	Total	6.60	6.09	7.12	8.49	8.57	8.40
	Rural	6.45	5.94	6.96	7.35	7.73	6.91
	Urban	7.99	7.42	8.58	11.80	11.06	12.63

Source: Census of India 2001. C- Series Social and Cultural Tables.

The data in the table 3.4 presents the distribution of elderly population in India and Uttar Pradesh by different religious groups. The proportion of elderly in India is highest among Jains (10.17 percent), followed by Sikhs (10.12 percent), Buddhists (8.62 percent) and Christians (8.55 percent). Among Hindus their proportion is 7.90 percent, whereas Muslims with 5.99 percent represent the lowest proportion of population in the age group of 60 years and above. The concentration of Hindus elderly population in rural areas is slightly higher as compared to the urban areas. However, the proportion of elderly among Christians and Jains are concentrated more in rural than in urban areas of India. Religious profile of the elderly people in the Uttar Pradesh indicates that the proportion of elderly population among Hindus (7.74 percent) is lower than national level 7.90 percent. Sex wise distribution shows the in all

[2] Premi, M.K.., (2001). "Population of India in the new millennium", Census of India, New Delhi, National book trust, pp, 161-162.

religions, the male elderly population is higher than females. In Uttar Pradesh, it is highest among (Sikhs 9.66 percent), followed by Jains (9.26 percent), Christians (7.98 percent) and Buddhist (7.88 percent). And Muslims represent the lowest proportion with 6.10 percent of aged population in Uttar Pradesh. Comparison between the rural and urban aged population of Uttar Pradesh in all religious communities, shows that it is slightly higher in urban areas than rural areas.

3.1.6. Distribution of Population Aged 60+ by Marital Status:

The study of population by marital status is useful for several reasons. Marriage involves the first step in the formation of a biological family. The pattern of marital status distribution of any society is determined by the combined effect of various biological, social, economic, religious and legal factors affecting marriage. With advancement in age most of them become widow and widowers, and role of the family in maintaining contact with society and the community gets weakened (Kohli, A.S 1996)[3]. Most of aged having already retired from active life live isolated lives. When the spouse is no more alive they are likely to get isolated all the more. Moreover a number of the aged are not able to maintain good health and they need care givers in the family. In the absence of spouse they may feel helpless and unattended. Thus, marital status has great importance for the elderly.

Table: 3.5 (A)
Proportion of Elderly Population by Marital Status in India and Uttar Pradesh in 2001

	Marital status	Total	Male	Female
India	Never-married	0.30	0.33	0.26
	Married	10.55	13.38	7.77
	widowed	57.57	56.16	58.40
	Divorced/Separated	9.51	12.69	8.16
Uttar Pradesh	Never-married	0.39	0.49	0.25
	Married	10.95	13.43	8.56
	widowed	57.77	53.93	60.10
	Divorced/Separated	8.60	9.55	7.49

Source: Census of India 2001, C- Series Social and Cultural Tables

According to the Census of India 2001, data in the table 3.5 (A) gives the distribution of marital status of elderly population in India and Uttar Pradesh. The percentage of widows among the aged females is much higher than that of widowers among aged males in India. The married males account for 13.43 percent of the population as against the 8.56 percent

[3] Kohli, A.S., (1996). "Social Situation of the in India", New Delhi: Anmol Publication Pvt. Ltd, pp.23-24.

females in the Uttar Pradesh. However, the percentage of widows among elderly women is 60.10 percent as compared to 53.93 percent widowers in Utter Pradesh. This ratio is higher than all India level. Although the proportion of divorced for the of males is higher compare to females in India as well Uttar Pradesh and are 12.69 and 9.55 percent respectively. On the other hand, the females divorced among elderly are 8.16 percent in India and 7.49 percent in Uttar Pradesh.

Table: 3.5 (B)

Region-Wise Proportion of Elderly by Marital Status in Uttar Pradesh: 2001

Regions	Marital status	Total	Male	Female
Northern Upper Ganga Plains	Never-married	0.34	0.43	0.23
	Married	10.48	12.61	8.36
	widowed	58.23	58.42	58.13
	Divorced/Separated	8.62	9.29	7.97
Central Region	Never-married	0.42	0.53	0.28
	Married	10.75	13.08	8.43
	widowed	55.69	49.83	59.21
	Divorced/Separated	7.43	8.12	6.55
Eastern Region	Never-married	0.35	0.43	0.25
	Married	11.52	14.38	8.91
	widowed	60.35	57.39	62.20
	Divorced/Separated	9.61	10.92	8.04
Southern Region	Never-married	0.44	0.61	0.22
	Married	11.20	13.54	8.87
	widowed	57.91	52.23	61.39
	Divorced/Separated	8.21	8.93	7.46
Southern Upper Ganga Plains	Never-married	0.44	0.61	0.22
	Married	11.20	13.54	8.87
	widowed	57.91	52.23	61.39
	Divorced/Separated	8.02	9.07	6.88

Source: Census of India 2001. C- Series Social and Cultural Tables.

Data in the table 3.5 (B) presents the region wise distribution of marital status of elderly in the Uttar Pradesh. The proportion of never-married males in Uttar Pradesh is much higher than that of females. Higher percentages of never-married males is found in the southern region (0.61percent) region as well as in Southern Upper Ganga Plains (0.61percent), followed by Central region (0.53 percent) Northern Upper Ganga Plains and Eastern region of Uttar Pradesh.

The Northern Upper Ganga Plains and the Eastern region both have lowest percentage of never-married males among elderly, each having 0.43 percent. In female category the highest percentage of never-married is found in the Central region (0.28 percent), followed by Eastern region (0.25 percent) and the Northern Upper Ganga plains (0.23 percent). The remaining regions (Southern and Southern Upper Ganga Plains) show the lowest proportion that is 0.22 percent.

A sex-wise analysis shows that in all the regions the percentage of widowers has increased substantially. The proportion of widowhood among women is very prominent as it constitutes almost 80 percent of elderly. The percentage of female widowhood is found to be the highest in the Eastern region (62.20 percent), followed by Southern region (61.39 percent) and in Central region (59.21 percent). And the lowest percentage is reported in Northern Upper Ganga Plains having 58.13 percent. Widows have more problems than widowers due to their low level of literacy and economic insecurity (Chen, 1998)[4].

Another feature of the marital status of elderly population is the highest number of the aged males in the married category. Highest percentage of married male among aged is found in the Eastern region (14.38 percent), followed by Southern (13.54 percent) and Central region (13.08 percent). And the lowest reported in Northern Upper Ganga Plains (12.61percent).

The gender differences in marital status is the outcomes of two factors,

1. The age differences between spouses (on an average females are at least five years younger to males).
2. Different rates of marriage (practice of remarriage which is prevalent in the case of males than among females).

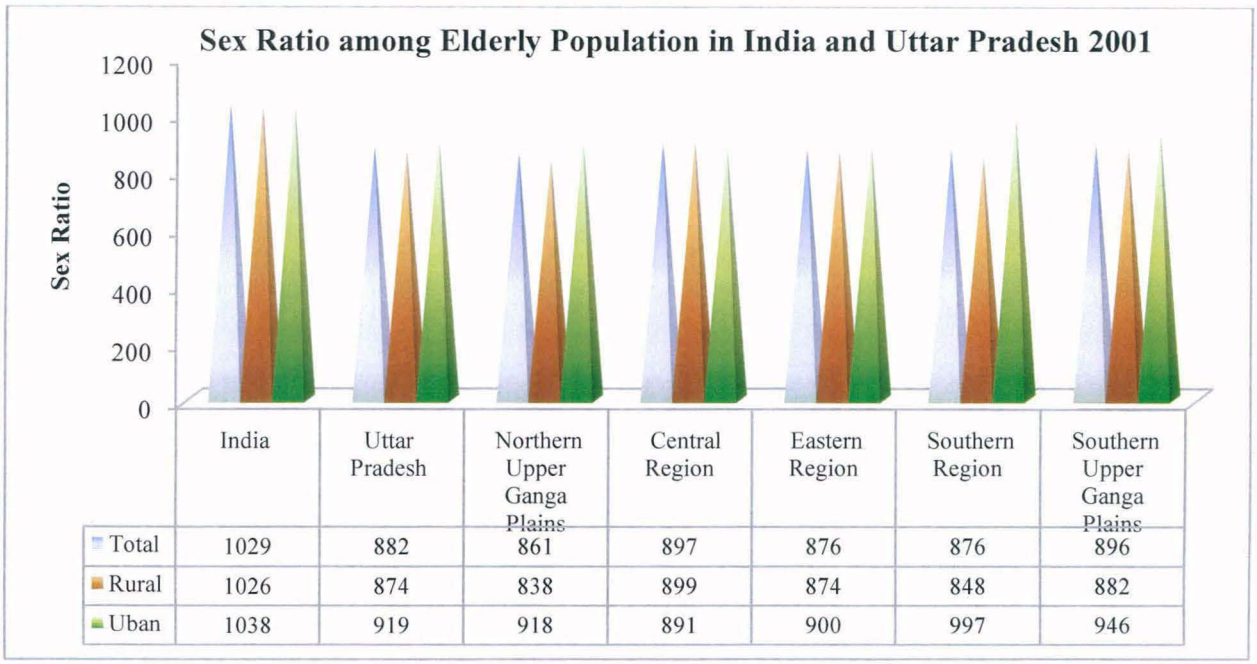
The proportion of divorced/separated among aged for both the males and females is small in comparison to married and widowed. Southern region is more prominent in divorced/separated category with 9.61 percent. The lowest percentage is reported in the Central regions with 7.43 percent. The elderly persons largely depend on family for their well-being and economic support. Thus, marital status is an important indicator of their well-being in our society. Widowhood in the Indian society is associated with considerable deprivation and discrimination.

[4] Chen, Martha Alter., (1998). "Widows in India", New Delhi, Sage Publications, pp, 23-25.

3.1.7. Sex Ratio of Elderly Population:

Sex ratio is the number of females per 1000 males in the population. This is an important social indicator to measure the extent of equality between males and females in a society at a given point of time. The sex ratio in the country has always remained unfavourable to females. Sex ratio has been defined as the number of females per 1000 males in the population. It is expressed as number of females per 1000 males. Sex Ratio increasingly becoming unfavourable to females during past three Censuses of India. It has been matter of great concern for the India.

Figure: 3.1



	India	Uttar Pradesh	Northern Upper Ganga Plains	Central Region	Eastern Region	Southern Region	Southern Upper Ganga Plains
Total	1029	882	861	897	876	876	896
Rural	1026	874	838	899	874	848	882
Uban	1038	919	918	891	900	997	946

Source: Census of India 2001. C- Series Social and Cultural Tables.

Figure 3.1 presents the sex ratio of elderly population in India and Uttar Pradesh. Sex ratio of India was 927 in 1991and it has increased to 933 in 2001. Sex ratio of elderly population in India is in favour of females. Sex ratio for the elderly population has been recorded maximum in urban area and minimum in rural areas of India as well as Uttar Pradesh.

The gender specific differences in mortality play an important role in determining the sex ratio of elderly. Because women tend to marry men who are several years older than them. Percent of widowed is much higher among women than men until old-age. As a consequence, the sex ratio increased with age for elderly population. It is substantially higher in urban areas (1038) than in rural areas (1026) of India in 2001.

The sex ratio among the aged in India was 960 female per 1000 male in 1981 and dropped to 930 female per 1000 male in 1991 but thereafter, increased to 1029 female per 1000 male in 2001. However, the sex ratio of aged population in Uttar Pradesh is 882 female per 1000 male. In rural areas of Uttar Pradesh it is 874 female per 1000 male which is comparatively lower than urban areas (919).

Regional variation in sex ratio among elderly population in Uttar Pradesh indicates that the Central part of the state has the highest sex ratio 897 female per 1000 male and the lowest is found in the Northern Upper Ganga Plains with 861 female per 1000 male. Sex ratio among aged in urban areas is found to be more than 900 in all the regions; however, in the rural areas it is reported less than 900 due to lower level of literacy rate of women.

3.1.8. Proportions of Scheduled Castes and Scheduled Tribes Elderly Population:

Caste is the most distinguishing cultural stratification in Indian society. It influences the socio-cultural relationships of each and every individual in our society. The ST and SC population are socially and economically disadvantaged groups (IIPS, 2007)[5].

Table: 3.6 (A)
Proportion of Scheduled Tribes Elderly in India and Uttar Pradesh: 2001

Area		Total	Male	Female
India	Total	6.08	5.71	6.47
	Rural	6.21	5.85	6.59
	Urban	4.61	4.17	5.08
Uttar Pradesh	Total	5.45	5.61	5.28
	Rural	5.68	5.91	5.43
	Urban	3.67	3.42	3.96

Source: Census of India 2001, C- Series Social and Cultural Tables

Data in table 3.6 (A) indicates, the proportions of scheduled tribes among aged population are 6.08 percent in India and 5.45 percent in Uttar Pradesh. The highest number of scheduled tribes population is found in rural areas and the lowest in urban areas for both the sexes in India as well as in Uttar Pradesh. Sex wise distribution of ST elderly population shows that

[5] IIPS., (2007). "National Family Health Survey" (*NFHS-3*), 2005–06. IIPS, Mumbai.

the proportion of female population is higher than males in both rural and urban areas of the country. In case of Uttar Pradesh, the proportion of males (5.91 percent) is higher in rural areas but lower in urban areas (3.42 percent). And the proportion of females is higher in urban areas (3.96 percent) but lower in rural areas (5.43 percent) of the states.

Table: 3.6 (B)

Region Wise Distribution of Scheduled Tribes Elderly in Uttar Pradesh: 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	6.15	5.76	6.59
	Rural	7.37	6.74	7.78
	Urban	2.63	2.86	2.71
Central Region	Total	5.37	5.23	5.53
	Rural	6.68	6.64	6.72
	Urban	4.02	3.93	4.37
Eastern Region	Total	5.29	5.46	5.11
	Rural	5.35	5.55	5.14
	Urban	4.09	3.99	3.91
Southern Region	Total	3.96	3.84	4.49
	Rural	5.63	5.64	5.08
	Urban	2.89	3.15	3.58
Southern Upper Ganga Plains	Total	5.63	5.94	5.33
	Rural	5.79	6.16	5.41
	Urban	3.84	3.60	4.57

Source: Census of India 2001. C- Series Social and Cultural Tables.

In the Uttar Pradesh, the proportion of scheduled tribes among aged population is below the national average. Higher concentration of scheduled tribes population is reported in rural areas (5.68 percent) than in urban areas (3.67 percent) of the state. A regional variation distribution of scheduled tribes show in the table 3.6 (B) depicts that the Northern Upper Ganga Plains region has highest value (6.15 percent), followed by Southern Upper Ganga Plains (5.63 percent) and Central region (5.37 percent).

The Southern regions (3.96 percent) represent the lowest proportion of scheduled tribes among aged in the Uttar Pradesh. Majority of scheduled tribes is found in rural areas of all the regions. These Older people belonging to the weaker sections of society are placed at a greater disadvantage level as compared to others and require special attention.

Table: 3.7 (A)

Proportion of Scheduled Castes Elderly in India and Uttar Pradesh: 2001

Area		Total	Male	Female
India	Total	6.87	6.53	7.23
	Rural	7.22	6.92	7.54
	Urban	5.47	5.00	5.98
Uttar Pradesh	Total	6.71	6.63	6.79
	Rural	6.94	6.90	6.98
	Urban	5.09	4.79	5.44

Source: Census of India 2001, C- Series Social and Cultural Tables

Data in the table 3.7(A) presents the distribution of scheduled castes among the aged population in India and Uttar Pradesh. In 2001, the Scheduled castes population among aged was 6.87 percent in India and 6.71 percent in Uttar Pradesh. The population of scheduled castes in the category of aged were observed to be higher in for rural areas than urban areas of India and as well as in Uttar Pradesh. Sex wise distribution shows that the percentage of males among Scheduled castes elderly is higher in Uttar Pradesh (6.63 percent) than India (6.53 percent). While female in the same category of aged population were found higher in India compared to Uttar Pradesh.

Table: 3.7 (B)
Region Wise Distribution of Scheduled Castes Elderly in Uttar Pradesh: 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	6.01	5.98	6.04
	Rural	6.36	6.39	6.33
	Urban	4.77	4.57	5.00
Central Region	Total	6.88	6.60	7.20
	Rural	7.13	6.85	7.45
	Urban	5.00	4.73	5.32
Eastern Region	Total	6.98	7.14	6.82
	Rural	7.07	7.26	6.88
	Urban	5.53	5.29	5.81
Southern Region	Total	7.32	7.11	7.56
	Rural	7.56	7.44	7.70
	Urban	6.22	5.63	6.89
Southern Upper Ganga Plains	Total	6.27	6.02	6.58
	Rural	6.59	6.35	6.87
	Urban	4.71	4.44	5.18

Source: Census of India 2001, C- Series Social and Cultural Tables

Regional-wise distribution presented in the table 3.7 (B) indicates the pattern of Scheduled castes aged population in Uttar Pradesh. The highest proportion of the Scheduled castes elderly are seen in the Southern region (7.32 percent), followed by the Eastern region (6.98 percent) and Central region (6.88 percent). While proportion of lowest Scheduled castes aged population is observed in Northern Upper Ganga Plains (6.01 percent). Southern region reported the highest Scheduled castes aged population in the rural areas (7.56 percent) while lowest was reported in the Northern Upper Ganga Plains with (6.36 percent). In case of urban areas the highest percentage of SC elderly population was reported in Southern region (6.22 percent), while lowest Scheduled Caste aged population reported in the Southern Upper Ganga Plains (4.71 percent). Slightly higher proportion of Scheduled Caste aged population is found in the rural areas due to their lower socio-economic status in compare to other castes. The proportion of males among Scheduled castes aged is higher than females in all regions of the Uttar Pradesh.

Section II

Economic Status of Elderly in India and Uttar Pradesh

3.2.1. Introduction:

One of the most important features of elderly population is that most of these 60 and above years old are economically active. James, K.S. (1994)[6] has analysed the pattern of financial conditions of elderly and reflected a greater degree of financial insecurity among the aged and states that this insecurity is more pronounced in the case of females compared to males. Financial problems are more common among widows and among elderly in Uttar Pradesh. Economic dependency is a major cause of worry for the elderly population. Economic factors play a major role in generating care for elderly people. Economic dependence is one of the major disabilities that very often affect the wellbeing of old persons. It may result from their declining ability to work because of decreased physical abilities. (Bhat, A.K and Dhruvarajan, R. 2001)[7]

3.2.2. Work participation of Elderly Population in India and Uttar Pradesh: 1961-2001

Work participation among the elderly is important from the point of view of understanding their economic dependence. Work participation rates among elderly males are very high in the Uttar Pradesh mainly because of the agrarian economy of the state where there is no specific age of retirement. Work participation in old-age is much higher in India than in the developed countries, (Dandekar, 1996). Higher proportions of elderly men participate in the economic activities compared to women. Inadequate income is a major problem of elderly in India. (Raju, S., 2002)[8]

'Work participation rate' can be explained with the help of the following formula:

$$\textbf{Work Participation Rate (WPR)} = \frac{\text{Total Number of Workers of All Ages X 100}}{\text{Total Population}}$$

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[6] James, K.S., (1994). "Indian Elderly: Asset or Liability", *Economic and Political Weekly*, Vol. 29, No. 36 pp. 35-39.

[7] Bhat, A.K and Dhruvarajan, R., (2001). "Ageing in India, Drifting Intergenerational Relations, Challenges and Options", *Journal of Ageing and Society*, Vol. 21 pp, 621-640.

[8] Raju, S.S., (2000). "Ageing in India: An Overview", In Gerontological Social Work in India, Murli Desai and Siva Raju (Eds.), New Delhi, B. R. Publishing, pp.25-26.

Table: 3.8
Work Participation Rates among elderly in Uttar Pradesh, 1961-2001

Years		Total	Male	Female
1961	Total	54.27	85.52	19.77
	Rural	55.84	88.05	20.91
	Urban	41.12	65.94	9.44
1971	Total	48.39	81.24	8.25
	Rural	49.53	83.26	8.64
	Urban	39.38	65.84	5.05
1981	Total	44.89	75.55	7.89
	Rural	46.72	78.38	8.55
	Urban	33.86	58.52	4.87
1991	Total	45.25	73.23	15.21
	Rural	47.62	71.22	9.84
	Urban	31.43	51.33	6.52
2001	Total	46.54	71.12	18.81
	Rural	49.61	74.50	21.22
	Urban	31.94	54.58	7.69

Source: Census of India B- series, Economic Tables

According to the Census of India, from 1961 to 2001, there has been a decline in the work participation rate among elderly in Uttar Pradesh. The table 3.8 indicates an appreciable decline in the work participation rate of elderly from 54.27 percent in 1961 to 46.54 percent in 2001.

The rural-urban differentials shows a higher work participation rate among elderly in rural areas than in urban areas because most of the people after their retirement from urban areas migrate to their parent rural areas and adopt the work practices there like farming, poultry and some other economic activities. Female work participation of elderly population has continuously declined over the past four decades in Uttar Pradesh. The participation of elderly women in labour activities is much lower when compared to their male counterparts. Female work participation rate among elderly in 1961 was 20.91 percent in rural areas.

Declined drastically from 20.91 percent in 1961 to 9.84 percent in 1991. But in 2001 having 18.82 percent there was sudden jump in the work participation rate of elderly women. As agriculture is still a dominant occupation in Uttar Pradesh, the participation of elderly in the work is still high. Higher work participation among elderly is reported in rural areas than in urban areas for both the sexes.

Table: 3.9 (A)

Work Participation Rate of Elderly Population in India and Uttar Pradesh, 2001

Area		Total	Male	Female
India	Total	40.31	60.25	20.93
	Rural	45.02	65.60	24.94
	Urban	26.21	44.12	8.96
Uttar Pradesh	Total	46.54	71.12	18.81
	Rural	49.61	74.50	21.22
	Urban	31.94	54.58	7.69

Source: Census of India B- series, Economic Tables

Data in the table 3.9(A) presents the work participation rate of elderly population in India and Uttar Pradesh 2001. The total work participation rate is higher in Uttar Pradesh (46.54 percent) as compared to India (40.13 percent).

Demographic data suggests that majority of working elderly population are found in the rural areas. Their work participation rate has gradually declined during 1961-1991 in India (Choudhry, 1991). The work participation rate of elderly population in the rural areas is higher than urban areas for both India and Uttar Pradesh.

Sex wise distribution of work participation rate shows that male work participation rate is higher in Uttar Pradesh (71.12 percent) as compared to the national level (60.25 percent). While female work participation rate of elderly are 20.93 percent for India and 18.81 percent for Uttar Pradesh. Work participation rate is higher among males as compare to females in both India and Uttar Pradesh.

Table: 3.9 (B)

Region Wise-Work Participation Rate of Elderly Population in Uttar Pradesh, 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	42.22	68.10	12.36
	Rural	46.68	73.22	15.16
	Urban	31.44	55.12	5.92
Central Region	Total	44.63	70.04	16.71
	Rural	49.31	76.38	19.55
	Urban	28.76	48.51	7.07
Eastern Region	Total	50.32	73.16	24.26
	Rural	52.00	74.85	25.84
	Urban	34.47	56.97	9.75
Southern Region	Total	48.32	67.35	26.75
	Rural	52.05	69.99	30.99
	Urban	33.03	55.56	10.88
Southern Upper Ganga Plains	Total	42.86	70.77	11.96
	Rural	45.55	74.25	13.26
	Urban	32.47	56.79	7.14

Source: Census of India B- series, Economic Tables.

Data in the tables 3.9 (B) present the regional variations of work participation rate of elderly population in Uttar Pradesh. The work participation rate is the highest in the Eastern region (50.32 percent) of Uttar Pradesh, followed by Southern region (48.32 percent) and Central region (44.63 percent). The lowest work participation rate is found in Northern Upper Ganga plains with 42.22 percent.

In rural areas, the work participation rate of elderly population is the highest in the Southern region (52.05 percent), followed by Eastern region (52 percent) and Central region (49.31 percent). The lowest was reported in Southern Upper Ganga Plains with 45.55 percent. With regard to work participation rate of elderly population in urban areas, the highest rate is found in the Eastern region (34.47percent) and the lowest rate is found in Central region (28.76 percent). The work participation rate of males is higher than females in all the region of Uttar Pradesh.

3.2.3. Main and Marginal-Workers among Elderly Population in Uttar Pradesh: 2001

Since 1981 the Census of India introduced a new category of worker on the basis of whether they had been working for 180 days in a year or less than that. The former group is called "Main Workers" and the latter is called "Marginal Workers." Census of India (2001) defines main and marginal workers as:

Main Workers: Those workers who had worked for the major part of the reference period (i.e. 6 months or more) were termed as Main Workers.

Marginal Workers: Those workers who had not worked for the major part of the reference period (i.e. 6 months or more) were termed as Marginal Workers.

Table: 3.10

Main and Marginal-Workers among Elderly Population in Uttar Pradesh by Age-Group: 2001

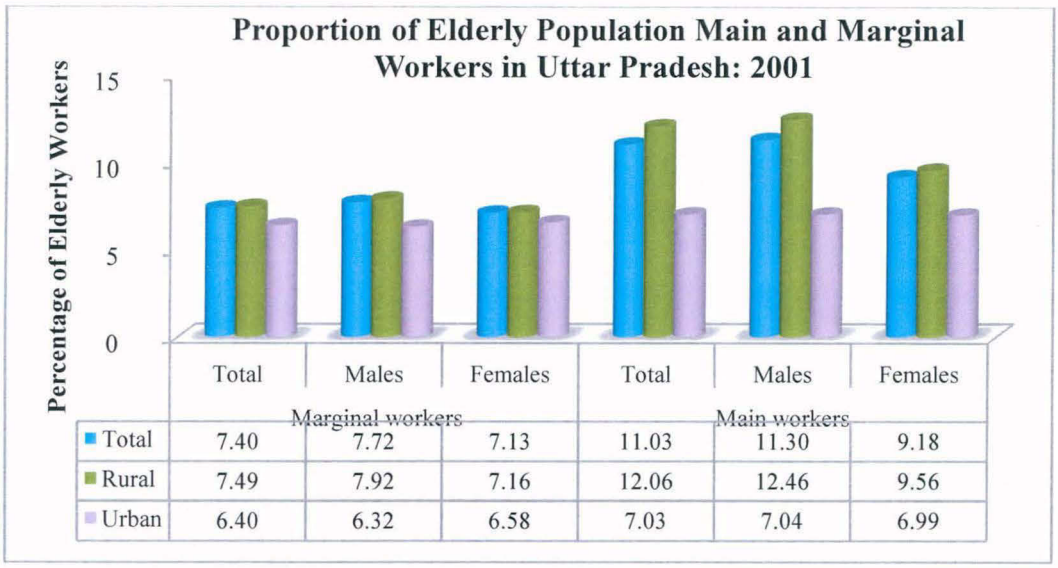
Place of Residence	Age-group	Marginal workers			Main workers		
		Total	Males	Females	Total	Males	Females
Total	60-69	5.31	5.11	5.47	7.55	7.67	6.78
	70-79	1.62	2.00	1.31	2.70	2.82	1.86
	80+	0.46	0.60	0.35	0.78	0.81	0.54
Rural	60-69	5.38	5.23	5.49	8.23	8.41	7.08
	70-79	1.64	2.07	1.31	2.98	3.14	1.93
	80+	0.47	0.62	0.35	0.85	0.90	0.55
Urban	60-69	4.48	4.31	4.87	4.93	4.92	5.02
	70-79	1.46	1.52	1.31	1.61	1.63	1.49
	80+	0.46	0.48	0.40	0.49	0.49	0.48

Source: Census of India 2001. B- Series Social and Cultural Tables.

Data in the table 3.10 presents the Main and marginal workers of Uttar Pradesh in age groups of years 60-80+. The data shows that in the marginal workers in the age group of 60-69 is 5.31 percent, while in the age group of 80+ is 0.46 percent. In the rural areas, the age group of 60-69 years female out number males from 5.49 to 5.23. But with the increase in the age group of both the sexs, the participation of female (0.35 percent) decreases more as compared to males (0.62 percent). Among both male and females in the category of marginal workers, the participation rate is lower in urban areas than rural areas. The data shows that the main workers in the age group of 60-69 constitute 7.55 percent while they in the age group 80+

constitute 0.78 percent. The main workers in the age group of 60-69 years are 8.23 percent in rural areas and 4.93 percent in urban area. The ratio in urban areas of elderly total population within the same age group is quite less than rural areas. Uttar Pradesh has experienced a significant decline in the proportion of elderly female main workers in all the age groups in 2001. Data shows that a share of main workers is higher than marginal workers. However, proportion of main and marginal workers among elderly is higher in rural than urban areas. In the category of main workers sex differentials are less pronounced for elderly possibly due to low literacy levels of females in this group.

Figure: 3.2

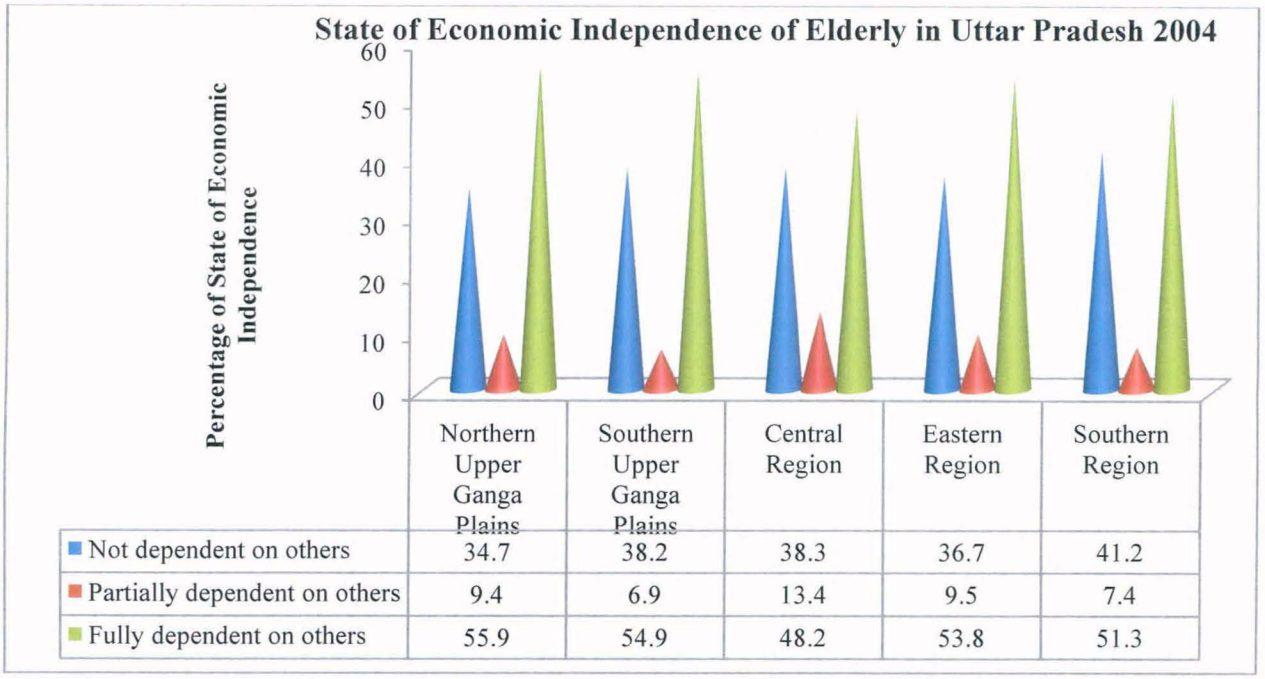


	Marginal workers			Main workers		
	Total	Males	Females	Total	Males	Females
Total	7.40	7.72	7.13	11.03	11.30	9.18
Rural	7.49	7.92	7.16	12.06	12.46	9.56
Urban	6.40	6.32	6.58	7.03	7.04	6.99

Source: Census of India 2001. B- Series Social and Cultural Tables.

The figure 3.2 indicates the proportion of main and marginal workers among aged population in Uttar Pradesh in 2001. The share of main workers is higher than marginal workers. The proportion of main workers is 12.06 percent in rural area whereas in urban areas it is 7.03 percent. Thus, the proportion of main worker is higher in the rural areas than urban. They are not only owners of the land but also participate in the productive activities as much as they can, according to their physical ability. Sex- wise distribution of main workers males 11.30 percent is higher than females 9.18 percent. The proportion of males of marginal workers is 7.22, percent while females stand for 7.13 percent. The percentage marginal workers and main workers among both males and females are higher in rural areas than urban area of Uttar Pradesh.

Figure: 3.3

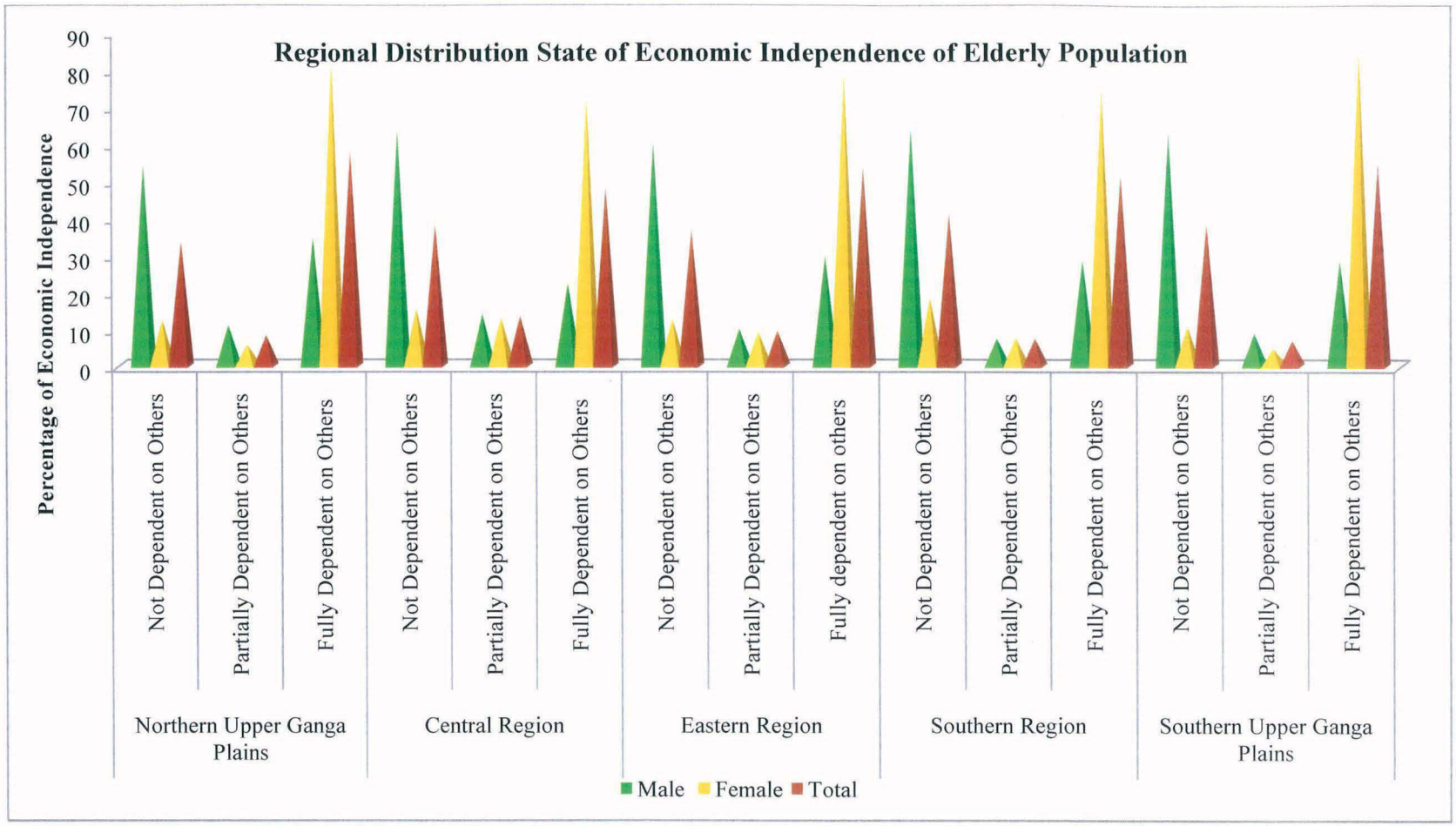


	Northern Upper Ganga Plains	Southern Upper Ganga Plains	Central Region	Eastern Region	Southern Region
Not dependent on others	34.7	38.2	38.3	36.7	41.2
Partially dependent on others	9.4	6.9	13.4	9.5	7.4
Fully dependent on others	55.9	54.9	48.2	53.8	51.3

Source: NSSO 60th Round: Jan-Jun 2004

Figure 3.3 indicates that the highest percentage of not dependent on others has been reported in the Southern region (41.2 percent), followed by Central (region 38.3) percent and Southern upper Ganga plains (38.2 percent), while lowest percentage of (34.7 percent) is reported in Northern Upper Ganga Plains. The partially dependent on others, highest elderly population is reported in the Central is (13.4 percent), followed by Eastern region (9.5 percent) and Northern Upper Ganga Plains (9.4 percent). The lowest proportion is represented in Southern Upper Ganga plains with 6.9 percent. They received support from their children or grandchildren. Regional variation in the state of economic independence shows that percentage of fully dependent on others is higher in all the regions. In the category of fully dependent on others, the highest elderly population is in Northern Upper Ganga Plains (55.9 percent), followed by Southern Upper Ganga Plains (54.9 percent). The lowest proportion is represented by the Central region with 48.2 percent. The greater dependence of aged females on others presumably reflects the high incidence of widowhood among them, their high illiteracy rates as well as the patriarchal nature of Indian society.

Figure: 3.4



Source: NSSO 60th Round: Jan-Jun 2004

Table: 3.11

State of Economic Independence of Elderly Population in Uttar Pradesh: 2004

State of Economic Independence	Male	Female
Not Dependent on Others	82.5	17.5
Partially Dependent on Others	56.0	44.0
Fully Dependent on Others	27.2	72.8

Source: NSSO 60th Round: Jan-Jun 2004

The elderly males are in terms of independency slightly better compared to female. Among the elderly males 82.5 percent are not dependent on others and 56.0 percent partially dependent on others. The elderly males in fully dependent on others are 27.2 percent because males are more engaged in work compared to females. The state of economic independence shows that 17.5 percent females are not dependent on others, while 44.0 percent partially dependent on others. Females fully dependent on others are 72.8 percent which may be attributed to widowhood, low level of literacy and patriarchal nature of inheritance.

3.2.4. Old- Age Dependency Ratio of Elderly in India and Uttar Pradesh: 2001

The evolution of aged dependency ratio is different in developed countries from the developing countries. Developed countries are 'ageing from the middle' and thus experience a reduction in the size of the labour force, whereas developing countries are 'ageing at the bottom' and therefore undergo increase in the labour force. As a result, the increase of the dependency ratio among the aged will have more impact on societies in developed countries than in developing countries.

Table: 3.12 (A)

Old-Age Dependency Ratio of Elderly in India Uttar Pradesh: 2001

Area	Place of Residence	Total	Male	Female
India	Total	14.42	14.59	14.23
	Rural	15.45	15.80	15.07
	Urban	10.98	10.67	11.35
Uttar Pradesh	Total	13.08	12.45	13.77
	Rural	14.11	13.59	14.65
	Urban	10.75	9.93	11.67

Source: Census of India 2001. C- Series Social and Cultural Tables.

Data in the table 3.12 (A) presents the total dependency ratio in India (14.42 percent) which is 14.59 percent for males and 14.23 percent for females. Dependency ratio in rural areas (15.45 percent) is reported higher than urban areas (10.98 percent). In Uttar Pradesh sex-wise distribution of dependency ratio indicates that the older women are much more dependent (14.65 percent) in the rural areas. While 13.59 percent of males aged population is categorised as dependent in the rural areas compared to 9.33 percent dependent in urban areas. Old age dependency ratio indicates higher dependency ratio in rural area than urban areas of India as well as Uttar Pradesh. Older people in rural areas depend on agriculture where is no age of retirement as they continue to work till they are physically able to participate in agricultural activities.

MAP: 3.1

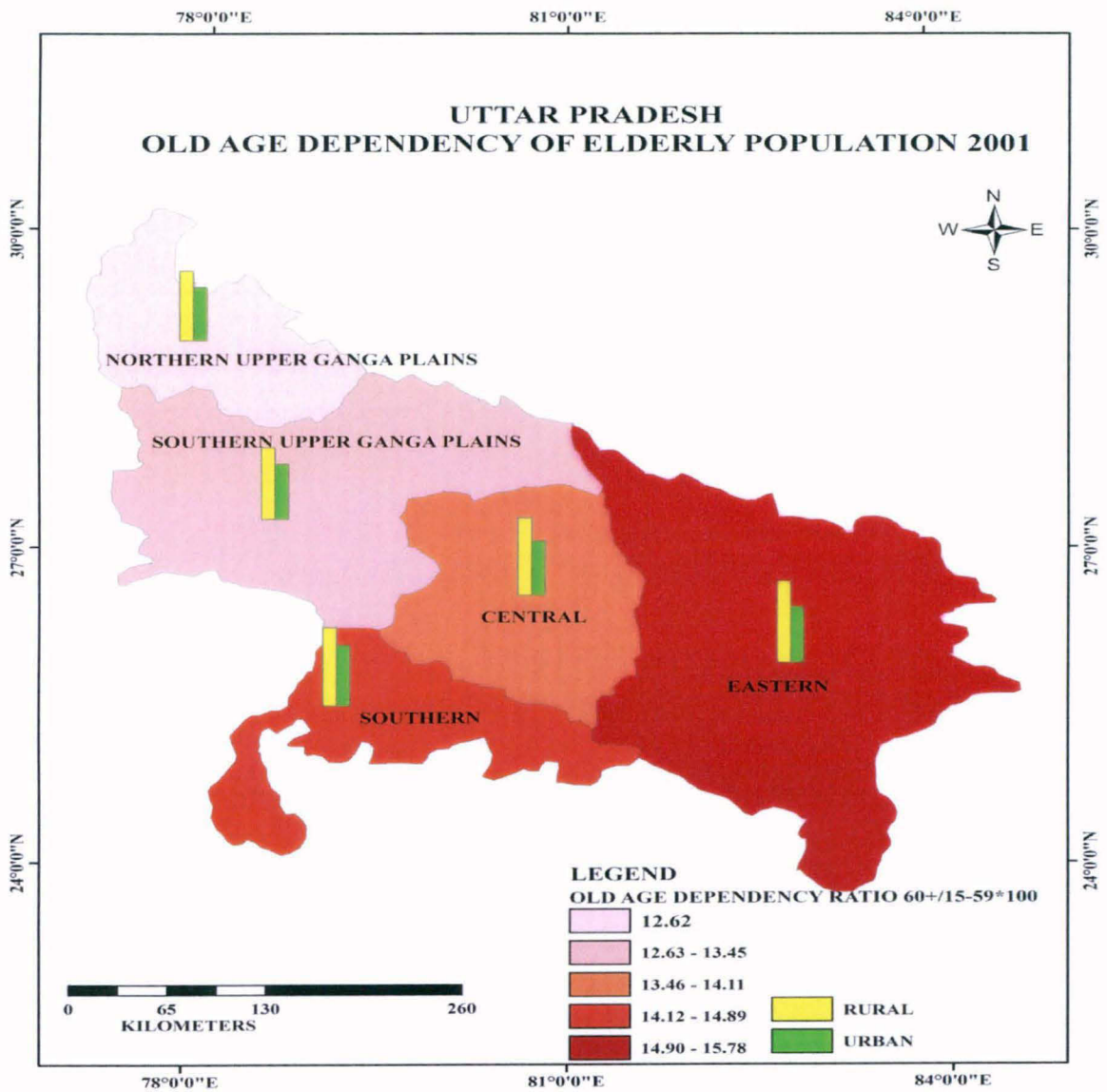


Table: 3.12 (B)
Region- Wise Old-Age Dependency Ratio of Elderly in Uttar Pradesh: 2001

Regions		Total	Male	Female
Northern Upper Ganga Plains	Total	12.62	12.70	12.53
	Rural	13.77	14.04	13.47
	Urban	10.51	10.26	10.81
Central Region	Total	14.11	13.86	14.40
	Rural	15.51	15.21	15.85
	Urban	10.86	10.72	11.03
Eastern Region	Total	15.78	16.67	14.88
	Rural	16.48	17.60	15.35
	Urban	11.27	11.03	11.57
Southern Region	Total	14.89	14.68	15.13
	Rural	15.75	15.77	15.72
	Urban	12.20	11.30	13.28
Southern Upper Ganga Plains	Total	13.45	13.08	13.88
	Rural	14.29	13.94	14.71
	Urban	11.01	10.57	11.52

Source: Census of India 2001. C- Series Social and Cultural Tables.

Note: ***The old-age dependency ratio is the ratio of the population aged 60 years and older persons to the working population in the 15-59 years age bracket. Similarly youth dependency ratio is the ratio of the population younger than 15 years old to the working population 15-49 years old.***

The regional variation of old age dependency ratio in Uttar Pradesh is shown dependency ratio in the table 3.12 (B). The highest dependency ratio is reported in the Eastern region (15.78 percent), followed by Southern region (14.89 percent) and Central region (14.11 percent). The lowest dependency ratio is found in Northern Upper Ganga Plains (12.62 percent). Poverty and inadequacy of income leads to dependence on children in old-age. The dependency ratio is primarily a demographic index and it is well recognised that the old-age dependency ratio is higher in rural areas than in the urban areas. This means that the burden of the aged on the working population is higher in rural areas as compared to that in urban areas. Region wise analysis shows that the male dependency ratio is higher than females in Uttar Pradesh proportion of male dependency ratio is more in rural area than in urban areas of all regions.

3.2.5. Living Arrangement of the Elderly Population:

The concept of living arrangement refers to the familial system of support and care of the elderly. The National Sample Survey (1991) found loneliness to be one of the major problems among the aged in India. A majority of the Indian elderly are without their spouse and live with children or grandchildren. They become essentially dependent on others for financial, physical and emotional support. An analysis of the living arrangement of the elderly originates from the assumption of declining joint family structure in the Indian society due to the ensuing socio-economic changes accompanied with urbanisation and industrialisation.(Rajan, S.I. and Mishra, U.S, 1999)[9]

Table: 3.13
Living Arrangement of Elderly Population in Uttar Pradesh: 2004

Regions	N.U.G.P*	Central	Eastern	Southern	S.U.G.P**
living alone as an inmate of old age home	1.3	0.5	0.6	0.4	1
not as an inmate of old age home	2.2	5.4	2.9	4.9	3.7
living with spouse only	10.5	11.5	8.5	11.7	10.8
with spouse and other members	43.9	45.4	49.9	45	44.8
without spouse but with children	37.5	33	33.1	32.3	34.7
other relations	4.1	3.4	4	4.6	4.6
Non- Relation	0.4	0.8	1	1	0.3

Source: NSSO 60th Round: Jan-Jun 2004.
*Northern Upper Ganga Plains, ** Southern Upper Ganga Plains.

Data in table 3.13 shows the pattern of living arrangement of elderly in Uttar Pradesh. The highest proportion of living with spouse only reported in the Southern regions (11.7 percent), followed by the Central region (11.5 percent) and Northern Upper Ganga Plains (10.5 percent). The lowest percentage is observed in the Eastern region (8.5 percent). On the other hand, aged person live with spouse and other member are highest in the Eastern region (49.9 percent), followed by the Central region (45.5 percent) and Southern region (45.0 percent) of the state. About 4 percent in each region live with their friends and relatives. The proportion of aged living as inmates in old age homes is higher in Northern Upper Ganga Plains (1.3 percent) while lowest is reported in Southern regions (0.4 percent) of the state. Dandekar, K. (1996)[10] has observed that the prime reason for the aged moving into old-age homes is the

[9] Rajan, S.I. and Mishra, U.S., (1999). "India's Elderly Burden or Challenge", New Delhi. Sage Publication, pp 220-221.
[10] Dandekar, K.., (1993). "The Aged, Their Problems and Social Intervention in Maharashtra", *Economic and Political Weekly*, Vol 27, No 23, pp 88-94.

lack of proper care for them within the family the inmates of the old-age homes expressed satisfaction with their stay there compared with their own homes. The sex differentials in living arrangement of the elderly are primarily because of higher incidence of widowhood among elderly females than among elderly males.

Table: 3.14
Region Wise Living Arrangement of Elderly in Uttar Pradesh: 2004

Northern Upper Ganga Plains	Total	Rural	Urban
living alone as an inmate of old age home	1.3	0.9	2.3
not as an inmate of old age home	2.2	2	2.5
living with spouse only	10.6	10.5	10.7
with spouse and other members	43.9	43.2	45.4
without spouse but with children	37.5	39.4	33.4
other relations	4.1	3.4	5.6
Non- Relation	0.4	0.6	0.1
Central Region			
living alone as an inmate of old age home	0.5	0.5	0.5
not as an inmate of old age home	5.4	6.1	2.4
living with spouse only	11.5	11.1	13.2
with spouse and other members	45.4	44.8	47.8
without spouse but with children	33	33.4	31.6
other relations	3.4	3.5	3
Non- Relation	0.8	0.6	1.5
Eastern Region			
living alone as an inmate of old age home	0.6	0.6	0
not as an inmate of old age home	2.9	3	2.4
living with spouse only	8.5	9.1	2.4
with spouse and other members	49.9	49.7	51.7
without spouse but with children	33.1	32.6	38.3
other relations	4	4.3	1.1
Non- Relation	1	0.7	4.1
Southern Region			
living alone as an inmate of old age home	0.4	0.6	0
not as an inmate of old age home	4.9	5.8	1.7
living with spouse only	11.7	11.8	11.7
with spouse and other members	45.1	43.9	48.6
without spouse but with children	32.3	32.2	32.4
other relations	4.6	4.5	5.2
Non- Relation	1	1.2	0.4
Southern Upper Ganga Plains			
living alone as an inmate of old age home	3.5	3.6	3.9
not as an inmate of old age home	4.7	4.2	4.1
living with spouse only	10.8	11.3	8.7
with spouse and other members	43.6	42.2	49.1
without spouse but with children	32.5	33.2	31.5
other relations	4.6	5.2	2.3
Non- Relation	0.3	0.3	0.4

Source: NSSO 60th Rounds, Jan-Jun 2004

Living arrangement of elderly population are influenced by a verity of factors, including marital status, financial well being, and family size and structure, as well as cultural traditions such as kinship patterns, the value placed on living independently or with family members. (Muthukrishnaveni, S., 2010)[11]

Data in the table 3.14 presents the living arrangement among the elderly in Uttar Pradesh. In Northern Upper Ganga Plains, the proportion of elderly living alone as an inmate of old age home is 0.9 percent in urban areas and 2.3 percent in rural areas. Those living with spouse only were reported 10.5 percent in rural area and 10.7 percent in urban area. Without spouse but with children indicate 39.4 percent in rural areas and 33.4 percent in urban area. The sex differential in the living arrangement of elderly is primarily because of the higher incidence of widowhood among elderly females than among elderly males. (Chakraborti, R.D., 2004)[12]

In case of Southern Upper Ganga Plains, the percentage of elderly living alone as an inmate of old age home is highest as compared to other regions. The elderly persons, who are living with their spouses alone, are 10.8 percent. It may be because of the displacement or migration of their children. In rural areas, they constitute 11.3 percent and in urban areas 8.7 percent. In Central part of the state, the pattern of living arrangements shows that about 11.1 percent of aged population is living with their spouses in rural areas and in urban area it is 13.2 percent. While 45.4 percent aged people lived with spouse and other members of the households 33 percent aged persons lived without spouse but with children. The main reason for the aged moving into old age homes is the lack of proper care for them within family setup.

3.2.6. Conclusion:

This chapter provides the socio-economic distribution of elderly population in India and Uttar Pradesh. The most of the population elderly are illiterate working beyond 60 years of age and most of them are widowed. Dependency ratio is slightly higher among women than men. Total dependency is higher in rural areas compared with urban areas.

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[11] Muthukrishnaveni, S., (2010). "Living Arrangements and Health Conditions of Elderly in Rural India", New Delhi, Serials, Publication, pp. 42-43.

[12] Chakraborti, R.D., (2000). "*The Greying of India*", New Delhi: Sage Publication, pp, 125-126.

The high incidence of dependency among older females is attributed to several factors such as widowhood, low literacy and patriarchal nature of inheritance. Work participation rate of elderly population is higher in rural area compared urban areas of India as well as Uttar Pradesh. The majority of elderly work in agricultural sector where the concept of retirement is even unheard. Both men and women continue to work as long as they are physically able. With the lack of familial support the elderly prefer to stay in old age homes. Most of the elderly are not supported by retirement benefits and the problem is more complicated especially in the rural areas. Majority of widows are dependent as they are less engaged in works due to limited opportunity.

Chapter 4

Health Condition and Health Care Utilisation of Elderly Population in Uttar Pradesh

Chapter: 4

Health Condition and Health Care Utilisation of Elderly Population in Uttar Pradesh

This chapter presents the health status of aged people in Uttar Pradesh. The first section of the chapter presents the nature of ailment and disability among aged in rural and urban areas of Uttar Pradesh. The second section deals with the sources of treatment of elderly, perceptions about current status of health of the elderly, physical morbidity, source of treatment and type of hospitals. In the last section a binary logistic regression analysis has been done to estimate the odds ratio of health status of aged with respect to different demographic and socio-economic characteristics.

4.1. Introduction:

With the increasing pace of growth of elderly population, the health of older persons in India has become the focus of attention. The demographic and socio-economic characteristics of the elderly are associated with their health status and use of health care services in Uttar Pradesh. Health and illness affect an individual's performance of basic personal tasks of daily routine. Health of elderly is determined by several factors such as gender, economic status, marital status, living standards and availability of social support etc. Malnutrition is an index of poor health in developing countries. Poverty is sought to be a major risk for the elderly in developing countries like India. Poverty has become the root cause of malnutrition, disease and deaths in old age.

Defining the Health of Older Person:

The World Health Organisation (WHO) defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease. One possible method to consider the importance or quality of life in old age is to combine survival with a concept of health to calculate healthy life expectancy (HLE), as an indicator of the population's healtstatus. Disability-free-life expectancy (DFLE) and life expectancy without chronic disease (LEWD) are the two estimates of life expectancy Kumar, V. (2003)[1].

[1] Kumar, V., (2003). "Health Status and Health Care Services among Older Persons in India", *Journal of Ageing and Social Policy*. Vol, 15, No2/3, pp, 67-83.

Rapid demographic transition without a concomitant epidemiological transition forms the dual load of infections and degenerative diseases in older persons. The health issues faced by an elderly are compounded by the lack of limited financial, emotional and social support provided by their families (Johnson, C. S. and Duraiswamy, M., 2010)[2]. Improvement in health and health care is associated with the spread of modern medicine and public health measures that accompanies socio-economic status (SES) of elderly. (Johnson, C.S, et.al. 2010). Senility and respiratory disorders are or proved to be prominent killers among today's elderly in India.

Alzheimer Diseases:

Alzheimer's disease accounts for 50 percent of dementia in elderly patients. In Alzheimer's disease the brain tissue irreversibly deteriorates, and death usually occurs ten or twelve years after onset of symptoms. Alzheimer's was initially described by the German neurologist in 1860. Alzheimer's is almost always a disease of old-age. Loss of body mass over time appears to be strongly linked to older adults' risk of developing Alzheimer's Diseases (AD) and the greater the loss the greater chance of a person developing the disease. (Mukherjee and Bhattacharya 2008)[3] Those elderly who live in urban areas face less health problems than the people living in rural areas because of better infrastructure and health facilities in urban areas. Lack of medical facilities in the villages and poor economic conditions might be responsible for the lower health status in rural areas.

4.2. Nature of Aliment among Elderly Population

Genetic factors and heredity are also important element in the health of an individual. The physical, social, economic and environmental factors affect individual's health. The physical health of a person decreases with increasing age the problem becomes more acute in the case of retired persons who generally lack the required financial resources for their health treatment in India. The incidence and prevalence of chronic as well as non-chronic diseases is obviously high among the elderly. Hence a large majority of landless rural aged are suffering from one or the other health problem and physical disabilities.

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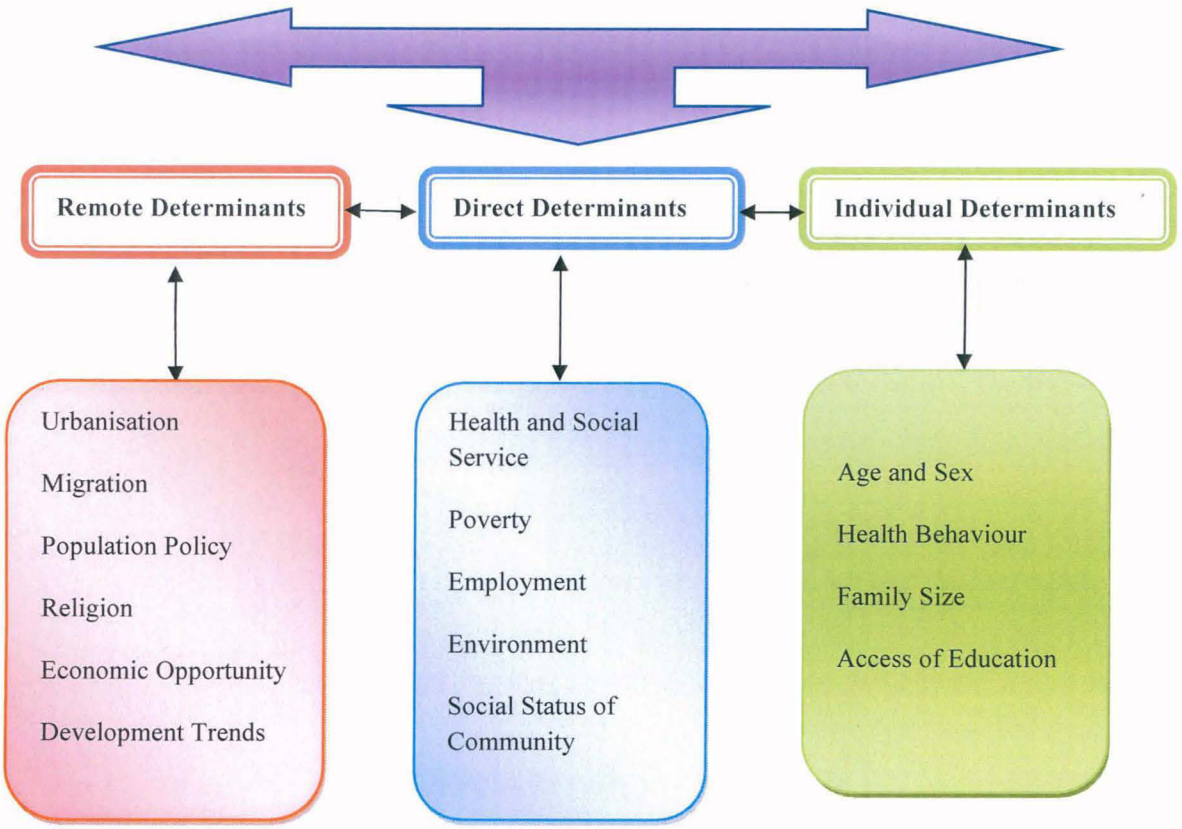
[2] Johnson, C. S. And Duraiswamy, M., (2010). "Health Service Provider's Perspectives on Healthy Aging in India", Journal *of Springer Science.* pp, 25-26.

[3] Mukherjee, M and Bhattacharya, S., (2008). "*Perception of the Elderly*", Global Vision Publishing House, New Delhi, pp, 43-44.

Figure 4.1
Remote, Intermediate and Proximal Determinants of the Health of the Elderly

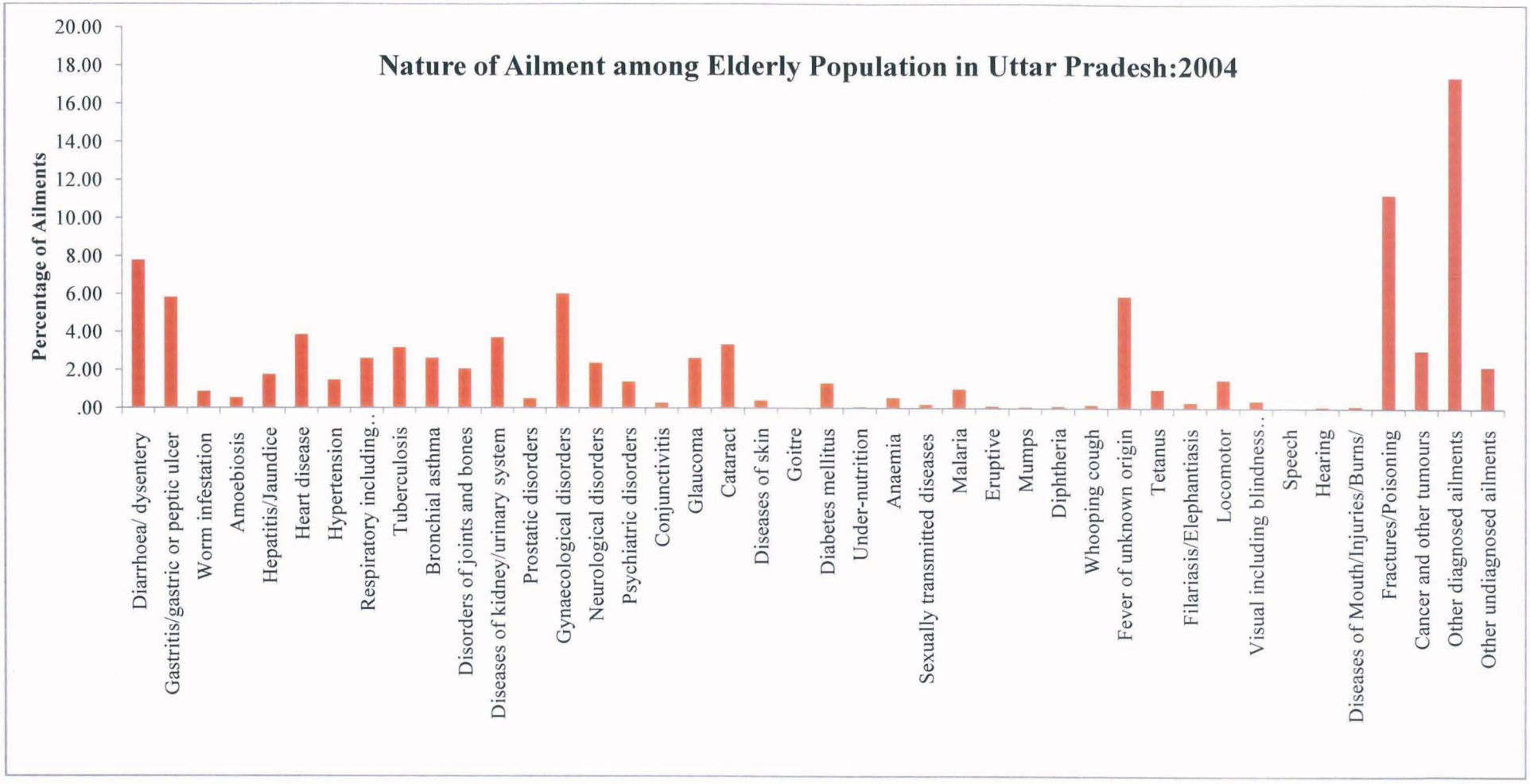


Health is a serious problem of the elderly population. Old age is accompanied by deterioration of health because ageing process leads to less resistance to diseases in the body. Poor health decreases the economic and social roles of the aged. The health problems can therefore, be regarded as major problems for the elderly.

In Figure 4.1[4] old-age is a period of multiple illness and general disability, along with the changes in the biological compositions. Life style factors also play an important role for disorders and diseases in old age. Old age diseases are not always curable implying a strain on financial as well as physical health infrastructure resources both at the macro and micro level. The elderly with their greater needs for health care put considerable strains on the system of health care in all societies. Promotion of healthy aged requires social and physical environment based on development of medical inventions and provision of care during illness.

[4] Ageing and Health., (1999). "A Global Challenge for the Twenty-First Century", *WHO*, pp 27-28.

Fig. 4.2



Source: NSSO 60th Round: Jan-Jun 2004

Table: 4.1

Nature of Ailment of Elderly in Uttar Pradesh: 2004

Nature of Ailment	Rural	Urban
Diarrhoea/ dysentery	7.1	9.4
Gastritis/gastric or peptic ulcer	6.2	4.9
Worm infestation	0.9	0.7
Amoebiosis	0.4	0.8
Hepatitis/Jaundice	1.6	2
Heart disease	3.3	5.1
Hypertension	1.3	1.9
Respiratory including ear/nose/throat ailments	2.6	2.6
Tuberculosis	3.5	2.4
Bronchial asthma	2.7	2.4
Disorders of joints and bones	1.4	3.7
Diseases of kidney/urinary system	3.7	3.8
Prostatic disorders	0.5	0.4
Gynaecological disorders	6.6	4.5
Neurological disorders	2.4	2.4
Psychiatric disorders	1.5	1
Conjunctivitis	0.3	0.3
Glaucoma	1.8	4.5
Cataract	3.4	3.4
Diseases of skin	0.5	0.2
Diabetes mellitus	1.3	1.2
Under-nutrition	0	0.1
Anaemia	0.7	0.2
Sexually transmitted diseases	0.3	0
Malaria	0.9	1.3
Eruptive	0.3	0.2
Mumps	0.1	0.1
Diphtheria	0.1	0.2
Whooping cough	0.2	0.1
Fever of unknown origin	5.5	6.8
Tetanus	1.2	0.3
Filariasis/Elephantiasis	0.3	0.3
Locomotor	1.9	0.6
Visual including blindness (excluding cataract)	0.5	0.1
Hearing	0.1	0.1
Diseases of Mouth/Injuries/Burns/	0.2	0.1
Fractures/Poisoning	11.7	10.2
Cancer and other tumours	3.2	2.7
Other diagnosed ailments	17.3	17.6
Other undiagnosed ailments	2.5	1.4

Source: NSSO 60th Round: Jan-Jun 2004

Data in the table 4.1 presents the distribution of nature of ailment by place of residence in Uttar Pradesh. Diseases most of the ailment are more prevalent in rural areas than urban areas of the state. Cardiovascular diseases and disability report to be more prevalent among the elderly population in Uttar Pradesh.

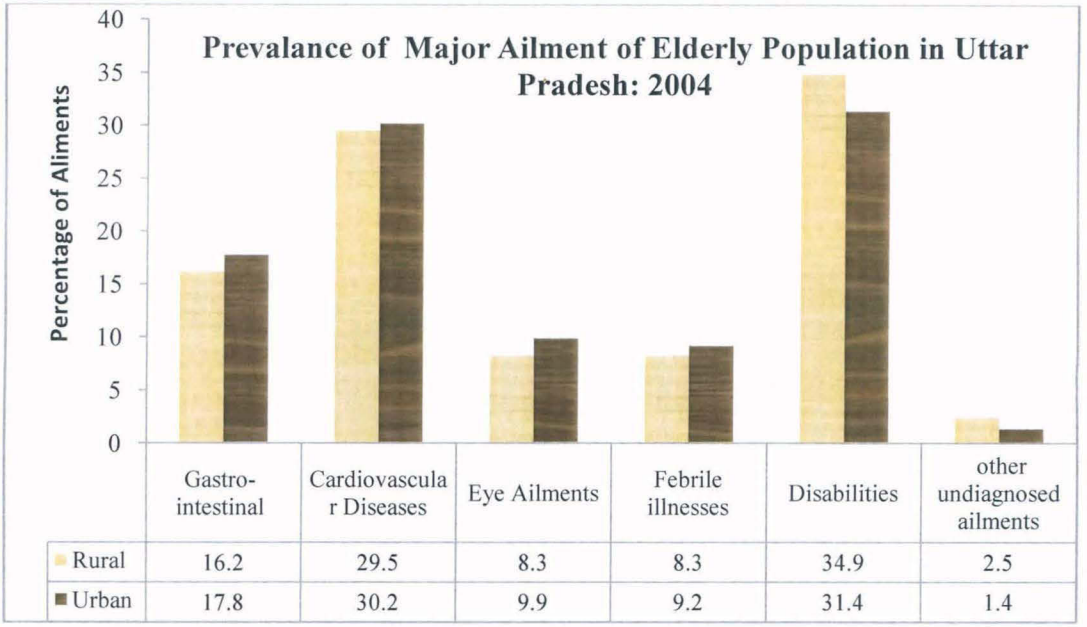
The respiratory system is directly related to age as the ability to transfer oxygen from the alveoli to the blood declines due to decreased elasticity of the bronchial tubes. Respiratory ailment account for is 2.6 percent in both the rural and urban areas. The smokers have greater likelihood of repeated episodes of bronchitis. Tobacco related cancer is more common among the males. The incidence of lung cancer is much higher among female. These diseases are found higher in rural area as compared to urban.

Heart diseases are found to be more prevalent among males than females in both rural and urban areas. Blood pressure, diabetes and prevalence of tuberculosis are higher among the elderly than younger population. Heart disease, diabetes and blood pressure are more common among urban elderly compared to cough and problems joint pain is common in rural elderly. Problem of joint pain, a common chronic disease, is found among the elderly people. The percentage of disorders of joints and bones is found to be 3.7 percent in urban areas and 1.4 percent in rural areas. The glands in human body secrete hormones which regulate the major function of the body such as metabolism, sugar control and body temperature. Breakdown or malfunctioning in any of these systems may cause high blood pressure diabetes and mellitus. These diseases are reported higher in rural areas of the states.

Tuberculosis is an infectious disease that affects lungs and other tissues in the human body. The most widely observed is tuberculosis of the lungs with symptoms of coughing up mucus fever, weight loss and chest pain. (Bhattacharya, R. 2005)[5] The prevalence of this deadly disease is much higher among the rural elderly (3.5 percent) than their urban counterparts (2.4 percent). The proportion of these diseases higher for males compared to females elderly, due to their smoking and alcoholic habits. Diarrhoea and dysenteric disorders among elderly population highlight the poor quality of the environment. It indicates that these diseases are found more in Urban (9.04 percent) than in rural (7.01 percent) areas of the state. The proportion of disease of skin is found higher (0.5 percent) in rural areas as compared to 0.2 percent in urban area. The proportion of unknown fever is found 5.5 percent in rural areas and 6.8 percent in urban areas. The proportion of gynaecological disorder is higher in rural areas as compared to urban areas.

[5] Bhattacharya, R., (2005). "Implications of an Aging Population in India", Challenges and Opportunities, Working Paper, Orlando, pp 12–14.

Figure: 4.3



	Gastro-intestinal	Cardiovascular Diseases	Eye Ailments	Febrile illnesses	Disabilities	other undiagnosed ailments
Rural	16.2	29.5	8.3	8.3	34.9	2.5
Urban	17.8	30.2	9.9	9.2	31.4	1.4

Source: NSSO 60th Round: Jan-Jun 2004

Figure 4.3 indicates the prevalence of ailment among the elderly in rural and urban areas of Uttar Pradesh. Disability is the most prevalent disease in both rural and urban areas. While proportion of cardiovascular disease is higher in urban areas having 30.2 percent than 29.5 percent in rural areas as per the above diagram. The leading cause of death in old age in Uttar Pradesh is cardiovascular diseases. The Global Burden of Disease (GBD) study estimates that 52 percent of CVD deaths occur below the age of 70 years in India. As shown in figure 4.2, the proportion of Gastro-intestinal disease is higher in urban areas. Both eye ailment and febrile illnesses are higher in urban area compared to rural areas of the states. Thus figure indicates that prevalence of only ailment and other undiagnosed ailment for elderly population is higher in rural areas due to financial dependency and lack of necessary care and support from family.

4.3. Disability of the Elderly Population:

Jagger et al, (2001)[6] defines disability as the inability to perform activities of daily living (ADLs) such as bathing, dressing, and feeding oneself. The prevalence rate of disability has been higher for females in both urban and rural areas. On the other hand, old age also implies increasing physical, mental and psychological disabilities (Bali, 1999).[7]

[6] Jagger et al., (2001). "Patterns of Onset of Disability in Activities of Daily Living with Age", *Journal of the American Geriatrics Society,* Vol, 49, 404 – 409.
[7] Bali, A.P., (1999). "Understanding Greying People of India", New Delhi: Inter- India Publication. pp, 153-154.

More than half of the aged had a disability, and the rate of disability was significantly higher among females as compared to males, more than 1/3 of the elderly were handicap and the rate of handicap among females was twice as much as that among the males. Problem of old-age disability in India is not just a medical problem, it is basically an economic problem. The lack of social security and a comprehensive Medicare system renders health care very high costly. (Yadav. 1999)[8] The chances of getting disability are significantly lower for literate compared to illiterates.

Table: 4.2
Proportion of Disability among Elderly Population in Uttar Pradesh 2001

Place of Residence	Type of disability	Uttar Pradesh		
		Total	Males	Females
Total	Total disabled Population	14.33	13.56	15.49
	In Seeing	15.17	14.86	15.58
	In Speech	7.48	6.92	8.28
	In Hearing	35.77	33.65	38.57
	In movement	13.79	12.75	15.87
	Mental	7.22	6.61	8.38
Rural	Total disabled Population	15.08	14.27	16.30
	In Seeing	16.16	15.87	16.52
	In Speech	7.74	7.10	8.68
	In Hearing	36.69	34.67	39.40
	In movement	14.02	12.96	16.18
	Mental	7.64	6.97	8.94
Urban	Total disabled Population	11.62	11.00	12.57
	In Seeing	11.66	11.33	12.10
	In Speech	6.53	6.27	6.89
	In Hearing	31.55	28.90	34.91
	In movement	12.85	11.89	14.68
	Mental	6.02	5.56	6.86

Source: Census of India 2001. C- Series Social and Cultural Tables.

The general characteristics of old age are physical and psychological changes and it is very common to associate old age with disability. As per Census of India 2001 the number of disabled in the country is 21.9 million, which is about 2.13 percent of the total population.

[8] Yadav, S.S., (1999). Disability and Handicap among Elderly Female Singaporeans, Women's Health and the Nation's Gain: An International Conference with a Special Focus on Women in Asia, Singapore, TSAO foundation.

Data in the table 4.2 presents the distribution of disability among aged population in Uttar Pradesh. The proportions of women suffering from physical disabilities are higher than men in Uttar Pradesh. Proportion of hearing disability is higher (35.77 percent), followed by seeing (15.17 per cent), in speech (7.48 percent) and in movement (13.79 per cent). The highest proportion of disability among elderly is reported in rural area and the lowest in urban areas of the states. Hearing impairment is the largest occurring disability among the elderly population in both rural and urban areas. The proportion of in hearing disease is 36.69 percent in rural area whereas in the urban areas it is 31.55 percent. Sex- wise distribution of disability shows that, the proportion of disability among female is significantly higher (15.49 percent) than among males (13.56 percent) in Uttar Pradesh. The regional variation in disability is possibly because of the existing difference in level of development and availability of health care facility.

Table: 4.3
Sources of Treatment of Elderly in Uttar Pradesh: 2004

Regions	Sources of Treatments	Total	Rural	Urban
Northern Upper Ganga Plains	Public Hospital	9.1	7.9	12
	Public Dispensary	2.5	1	5.7
	Private Hospital	20.6	22	17.6
	Private Doctor	67.8	69.2	64.7
Central Region	Public Hospital	16.7	17.3	15.6
	Public Dispensary	3.9	1.9	7.7
	Private Hospital	23.1	19.8	29.2
	Private Doctor	56.3	61	47.5
Eastern Region	Public Hospital	15.7	14	20.9
	Public Dispensary	0.8	0.7	0.4
	Private Hospital	21.9	23.9	15.9
	Private Doctor	61.6	61.4	62.8
Southern Region	Public Hospital	21.6	23.5	18.1
	Public Dispensary	1.3	0.1	3.5
	Private Hospital	19.2	20.1	17.6
	Private Doctor	57.9	56.3	60.8
Southern Upper Ganga Plains	Public Hospital	10.3	6.3	20.8
	Public Dispensary	2.1	0.3	6.9
	Private Hospital	21	24.2	12.6
	Private Doctor	66.6	69.2	59.7

Source: NSSO 60th round: Jan-Jun 2004

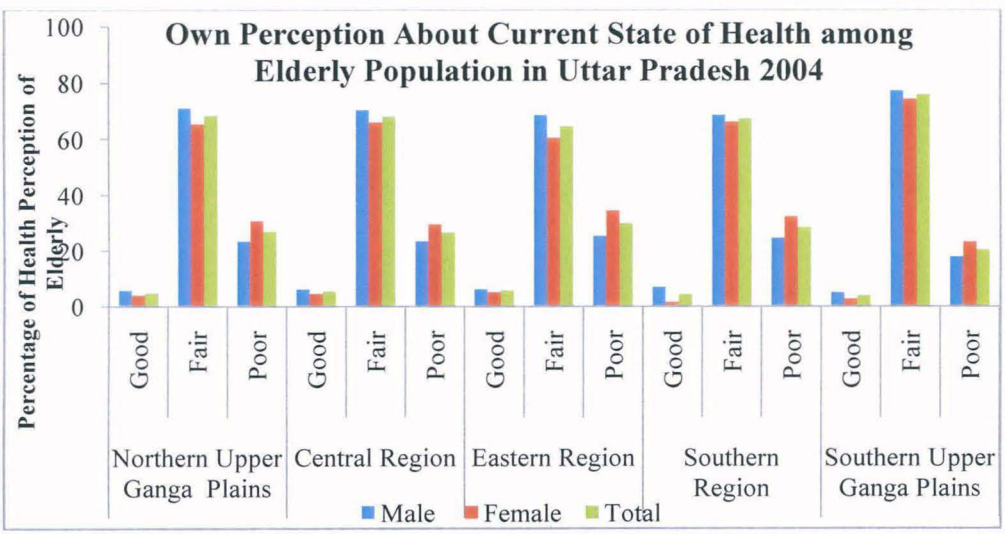
In Uttar Pradesh, the distribution of health care facilities includes 7 Government and 4 Private Medical colleges and Hospitals, 53 District Hospitals, 13 Combined Hospitals, 388 Community Health Centres, 823 Block PHCs, 2817 Sub Block PHCs apart from 20521 Sub Centres; yet only 9 percent of the State's population actually make the use of these facilities for treatment of ordinary ailments and people have to remain mostly depended on the private

health care[9] centres. Sources of treatment for hospitalisation cases are given in table 4.3. More than 60 percent cases are reported as hospitalised. Elderly people has availed treatment from private doctors, are reported highest in the Northern Upper Ganga Plains (67.8 percent), followed by Southern Upper Ganga Plains (66.6 percent), Eastern region (61.6 percent) and Central region (56.3 percent) of hospitalised cases in Uttar Pradesh. The proportions of private doctors are higher in rural areas while public hospitals and public dispensaries are higher in urban areas. The proportion of public hospitals and public dispensaries are lower than other source of treatment in Uttar Pradesh.Thus, higher percentages of hospitalised cases observed in the rural areas are due to the low medical and health care facilities. Private health care services are much higher and widespread than public services. In Uttar Pradesh, destitute elderly peoples have higher probability of hospitalised case.

4.4. Own Perceptions about Current State of Health of Elderly:

The perception of health means the subjective evaluation of health status, which has at least two aspects. One of these is simple awareness of the body and its health. The second is a personal evaluation of health. (Kent and Matson 1972)[10]

Figure: 4.4



Source: NSSO 60th round: Jan-Jun 2004

[9] Reports on Health Sector In Uttar Pradesh, December, (2005) *Department of Planning*, Government of Uttar Pradesh.

[10] Kent and Matson., (1972). "The Impact of health on the aged family", *Aging and the Family* Vol. 21, No. 1, pp. 29-36.

The costs of health care are the major items in the budget of most elderly people in India. One's perception about health indicates the health condition of individuals. Perceptions of health play a vital role for determining the health condition of the elderly. The highest percentage of poor perception about health status is reported in the Eastern region (29.8 percent), followed by the Southern region (28.5 percent) and Northern Upper Ganga Plains (26.9 percent). The lowest proportion is observed in the Southern Upper Ganga Plains (20.4 percent) who are suffering from poor perception about health.

In the figure 4.4, Sex-wise distribution of health status among elderly population indicates better perception about health in favour of males in all regions of Uttar Pradesh compared to females. The proportion of fair perception about current state of health among elderly population is found to be highest compared to other perceptions about of health i.e. poor and good. Southern Upper Ganga Plains reported highest percentage (75.7) of fair perception about health among the elderly population.

In Uttar Pradesh large number of aged population live in rural areas with low level of education, where health care medical facilities are less developed than other states of the country. The category of good perception on good health is found to be lower in all the regions of Uttar Pradesh because of availability of low level of medical facilities, awareness, lack of education and dependence on others for medical expenses. The proportion of good perception about health among elderly is reported highest in the Eastern region (5.7 percent) followed by the Central (5.3 percent) and Northern Upper Ganga Plains (4.8 percent). Southern Upper Ganga Plains reported the lowest proportion of good perception about health (3.9 percent) in the state. Overall perception about health indicates that women have significantly poor health status than men in Uttar Pradesh.

4.5. Physical Mobility of the Elderly Population:

The physical mobility of the elderly is the ability to move, which is an important indicator of their physical condition of health and it also indicates the degree of their dependence on others for movement and performing their daily routine. (Mini, G.K. 2008)[11]

[11] Mini, G. K.., (2008). "Socio-Economic and Demographic Diversity in the Health Status of Elderly People in a Transitional Society", Kerala. *Journal of Biosocial Science.* vol.41, No 4, pp, 457-467.

Table: 4.4
Physical Mobility of Elderly in Uttar Pradesh: 2004

Regions	Physical Mobility	Male	Female	Total
Northern Upper Ganga Plains	Confined to bed	1.1	2.1	1.6
	Confined to home	5.3	5	5.2
	Physical mobile	93.6	92.9	93.2
Central Region	Confined to bed	1	1.5	1.3
	Confined to home	4.2	8.5	6.5
	Physical mobile	94.8	90	92.3
Eastern Region	Confined to bed	1.1	2.4	1.7
	Confined to home	5.7	8.5	7.1
	Physical mobile	93.2	89.1	91.2
Southern Region	Confined to bed	0.8	2.1	1.5
	Confined to home	4.5	11.4	8
	Physical mobile	94.7	86.5	90.6
Southern Upper Ganga Plains	Confined to bed	1	1.1	1.1
	Confined to home	1.9	5.3	3.5
	Physical mobile	97.1	93.6	95.4

Source: NSSO 60th round: Jan-Jun 2004

The male-female disparity in the proportion of persons with physical immobility is observed at region level in both rural and urban areas. From the table 4.4 given above we can conclude that

- Physical immobility seems to be a function of old-age.
- Physical health status is probably more influenced by biological conditions.
- The physical health of a person decreases with increase in age.

The problem becomes more acute in the case of retired people who lack the required financial resources for the health treatment. The proportions of aged persons in the category of confined to their home or bed indicate that females have higher proportion in comparison to males in all regions of the state. In the category of physical mobile the aged population have higher proportion in all regions (over 85 percent). Regional distribution of physical mobility of elderly population is shown in the table 4.4. The proportion of highest physical mobility reported in Southern Upper Ganga Plains (97.1 percent), followed by the Central region (94.8 percent) and the Southern region (94.7 percent) while the lowest has been observed in the Eastern region i.e. 93.2 percent. However, sex-wise incidence of confinement is observed to

be higher among males than females in all the regions. Higher age is a predictor of poorer functional status, but there is little evidence for an independent effect of on functional status of elderly. Health problems have differential impact on functional status among primary care of elderly.

Table: 4.5
Type of Hospitals in Uttar Pradesh: 2004

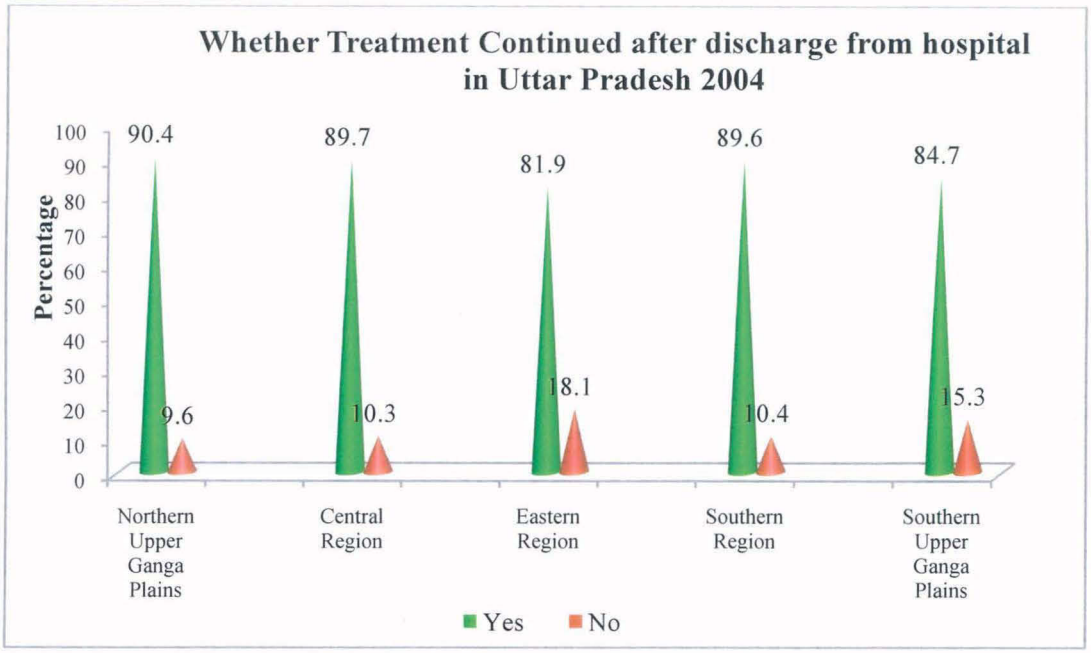
Regions	Type of Hospitals	Total	Rural	Urban
Northern Upper Ganga Plains	Public Hospital	21.4	22.9	18.9
	Public Dispensary	2.7	1.9	4
	Private Hospital	75.9	75.2	77.1
Central Region	Public Hospital	32.1	37	24.6
	Public Dispensary	1.9	0.6	3.8
	Private Hospital	66	62.4	71.6
Eastern Region	Public Hospital	31	30.3	33.3
	Public Dispensary	1.2	0.8	2.6
	Private Hospital	67.8	68.9	64.1
Southern Region	Public Hospital	54.5	51.2	60.2
	Public Dispensary	0.8	0.4	1.3
	Private Hospital	44.7	48.4	38.5
Southern Upper Ganga Plains	Public Hospital	18.5	14.2	31.3
	Public Dispensary	2	2.5	0.5
	Private Hospital	79.5	83.3	68.2

Source: NSSO 60th round: Jan-Jun 2004

Different types of hospitals provide different quality of health care facilities and social welfare services. The aging population will likely to have a major impact on hospital utilisation due to physical conditions of people in old-age period than the younger ones. Data in the table 4.5 indicates the distribution of hospitals in Uttar Pradesh. It is seen that the private hospitals dominate in treating the patients, i.e. about 60 to 70 per cent of the hospitalised cases, in the both rural and urban area. Most of the patients prefer allopathic treatment and they visit private hospitals followed by public hospitals in Uttar Pradesh due to better care for patients in private hospitals than public hospitals. Because of poor economic conditions the number of elderly patients is higher in public hospital which is affecting their

health status in rural as well as urban areas. The proportion of public dispensaries is lower than other source of treatments like public hospitals and private hospitals.

Figure: 4.5



Source: NSSO 60th round: Jan-Jun 2004

Whether treatment continued after discharge from hospital of elderly in Uttar Pradesh is presented in figure 4.5. Almost 90 percent patient's treatment is continued after discharge from hospitals in all region of the state. About 10 percent of hospitalised cases stop taking treatment after discharge from hospitals due to lack of economic security of elderly population and lack of proper care and support.

Regional variations in the continuation of treatment after discharge from hospitals, indicates Northern Upper Ganga Plains reports highest proportion of treatment continued after discharge from hospitals followed by Central and the Southern regions. On the other hand, the proportion of treatment stopped after discharge from hospitals is very less in comparison to those who continue treatment after discharge from hospitals in all regions. Southern Upper Ganga Plains reported the highest percentage of elderly who stop treatment after discharge from hospital than the Eastern and Southern regions of Uttar Pradesh.

4.6. Results of Binary Logistic Regression:

This section deals with logistic regression analysis to examine how socio-economic and demographic variables impact the health status of elderly population in Uttar Pradesh.

Table: 4.6
Results of Binary Logistic Regression of Uttar Pradesh

Dependent Variable: Whether Hospitalised Yes: 1, No: 0	
Characteristics of Independent Variables	Odds Ratios
Sector	
1.Urban (Ref.)	
2.Rural	.348***
Sex	
1.Male (Ref.)	
2.Female	.289***
State of Economic Dependency	
1.Not Dependent on Others (Ref.)	
2.Partially dependent on others	2.491***
3.Fully dependent on others	.333***
Age	
1. 60-69(Ref.)	
2.69-79	2.091***
3.80+	1.925***
Living arrangement (Recode)	
1.Living alone as: an inmate of old age homes (Ref.)	
2.Living with Spouse only	.000
Literacy (Recode)	
1.Literate(Ref.)	
2.Illiterates	1.671***
Marital Status (Recode)	
1. Married (Ref.)	
2. Single	.307***
Religion (Recode)	
1.Hindu (Ref.)	
2.Muslims	.348***
3.Others	.090***
Social Groups (Recode)	
1.SC (Ref.)	
2.ST	1.070***
3.Others	2.032***
Constant	1.1889

Ref.: reference category

*** indicates significance at 1 percent level of significance

** indicates significance at 5 percent level of significance

* indicates significance at 10 percent level of significance

Regression Results:

Regression result is presented in table 4.6. Control variables include demographic and socio-economic factors like literacy, marital status and economic dependency that may cause deterioration in health outcomes in old age. These factors also turn out to be highly significant.

There is significant association between the socio-economic factors and health status of elderly population Uttar Pradesh. The influence of whether hospitalised for elderly in Uttar Pradesh is less in rural areas in comparison to those who live in urban areas. Lower number of hospitalised cases in rural areas is due to the lack of economic dependency and lower health care facilities and medical facilities in rural areas of Uttar Pradesh.

Women have lesser chance to be hospitalised compared to men. The health condition among female elderly is lower than males while they have and higher life expectancy at birth. Females have lower mortality than men in almost every age group. Evidence also suggests that as happened in industrialised countries, many developing countries including India are experiencing the same story in term of increased case of in alcohol and tobacco consumption and industrial accidents, all of which tends to adversely affect men more than women. Longevity in India has also increased significantly due to improvement in medical facilities, control of epidemics and famines and other infectious diseases which resulted decline in the level of mortality.

The odds ratio shows that older women are 0.28 times less likely to report hospitalised. Health status of elderly is highly significantly associated with age that indicates to be an important factor in determining the health status of aged. With the increasing age and higher prevalence of morbidity increase among elderly they have 2.09 times higher chance to be hospitalise. Odds ratio of state of economic dependency among elderly in Uttar Pradesh shows that have 2.49 times higher chance to be hospitalised those who are partially dependent on others.

The living arrangement for elderly shows those living with spouses have a significantly lower probability of reporting lower health status among aged. Literacy is found to be very important factor in shaping the magnitude of the health status of elderly.

Majority of the elderly population in the Uttar Pradesh are illiterate and therefore reported a very low health status. An odds ratio indicates the illiterates have 1.6 times more chance to be hospitalised during the period of bed health condition. Marital status of elderly is another demographic indicator that determines the health status of the elderly. It is presumed that those elderly, who are currently married, have an advantage of getting necessary support from the spouse in facing various health problems.

Results of odds ratio indicates that married elderly people have 0.30 times less chances to be hospitalised. Such support from the spouse should be more important during the period of ill health of the elderly. Married elderly are in better health compared with the never-married and divorced or separated.

Social group is an important variable to analyse the health status of elderly. Compared to the elderly in the general population, the elderly belonging to the SC and ST have reported poorer health status. Odds ratio indicates ST has 2.03 times more chance to be hospitalised than others caste. That means socio-economic status of Scheduled Tribes is lower than the other population groups. Finally, the regression results helped to understand the relative importance of various demographic and socio-economic variables that shape the health status of the elderly in Uttar Pradesh. Results of logistic regression show that with the increase in educations, standard of economic status of households indicates better health status of elderly population.

Table: 4.7

Logistic Regression Estimates of Whether Hospitalised Regional level Analysis

Dependent Variable: Whether Hospitalised Yes: 1, No: 0		Northern Upper Ganga Plains	Central Region	Southern Region	Eastern Region	Southern Upper Ganga Plains
Characteristics of Independent Variables						
Sector		Odd Ratio	Odd Ratio	Odd Ratio	Odd Ratio	Odd Ratio
1.Urban (Ref.)						
2.Rural		1.501***	0.363***	1.148***	4.211	4.553***
Sex	1.Male (Ref.)					
	2.Female	2.340***	7.401***	0.214***	2.524	1.048
State of Economic Dependency						
1.Not Dependent on Others (Ref.)						
2.Partially dependent on others		2.019	0.766***	1.013	5.466	4.120
3.Fully dependent on others		.071***	0.233***	2.376***	0.170***	0.192***
Age	1. 60-69(Ref.)					
	2.69-79	.029***	3.597***	1.299	0.393***	1.780***
	3.80+	.128***	7.341	5.881***	2.624	4.120
Living arrangement						
1.Living alone as: an inmate of old age homes (Ref.)						
2.Living with Spouse only		.000	0.000	3.110***	.000	.000
Literacy	1.Literate(Ref.)					
	2.Illiterates	.787***	4.203***	0.321***	0.459***	0.326***
Marital Status	1. Married (Ref.)					
	2. Single	0.326***	0.277***	0.375***	0.216***	0.358***
Religion	1.Hindu (Ref.)					
	2.Muslims	.729***	0.163***	3.753	1.232***	3.712
	3.Others	.049***	1.199	1.226***	2.746***	2.035
Social Groups	1.SC (Ref.)					
	2.ST	.222***	3.471	1.233	4.052	2.120***
	3.Others	.335****	7.371	8.815***	2.106***	3.258***
Constant		2.645	0.41	.000	242.749	5.285

*** Indicates significance at 1 percent level of significance

** Indicates significance at 5 percent level of significance

* Indicates significance at 10 percent level of significance

Explanatory Variables under Logistic Regression Analysis:

The binary logistic regression techniques facilitates in eliciting the effects of several predictor variables, which may be quantitative, categorical or mixture of the two response variables. Logistic analysis is used to identify the factors, which is used has a significant influence on the health status of elderly population in Uttar Pradesh.

Sectors: Elderly population in rural higher probability of hospitalised compared to those who live in urban areas in all the regions of Uttar Pradesh. In Southern Upper Ganga Plains has 4.55 times higher chance to hospitalise. Lowest proportion of hospitalise elderly population results indicates in the Central region 0.637 times less chance to be hospitalise in Uttar Pradesh.

Age: old age general is associated with multidimensional problems. The problems which are associated with age highly influence. In Uttar Pradesh females are experience poorer healths despite their higher life expectancy with higher chance to hospitalise in all the regions. In the age-group of 80+ in Southern region 5.88 and Central region 7.34 times more the chance to be hospitalise compared with the 60-69 of age-group. With the increase of age the illness for elderly population becomes more chronic.

Marital Status: It is usually said that marital status of elderly plays a significant role in determining the health status of elderly. This result strongly supports the existing literature in that the currently married elderly populations experience better health compared with the singles in all regions of the state. In Northern Upper Ganga plains have 0.674 times less chance to be hospitalised this proportion increased 0.784 times less in Eastern Region. Single aged is economically and socially vulnerable due to the loss of support and care from families.

Literacy: It is usually understood that higher literacy rate coupled with. The probability of whether hospitalised is seemed to be generally increasing with the decreasing in the level of education. After controlling for literacy in the table 4.7 the odds ratio illiterate indicates the in all the regions illiterate elderly less chance to hospitalise compare with the literate

population. Low level of socio- economic condition for illiterate are might be responsible for less chance to hospitalise.

Social Group: Even today's scenario when everything is changing rapidly in the wake of globalisation, still caste has its bearing on the socio-economic condition of the people. Compared to SC elderly, general caste elderly are more likely to be hospitalised. The ST population was found to be worst health condition and higher chance hospitalise compared with the SC category. On the other hand the elderly population belonging to others category result shows that the probability of hospitalise higher compared to ST and SC in all the regions. In Southern region 8.18 and Central region 7.37 times more elderly people have chance to be hospitalise compared to other regions of Uttar Pradesh.

Living Arrangement: Living arrangement is very important in terms of providing care and support for the elderly. Females are more likely than males to live alone and are less likely to live with a spouse. A much higher proportion of elderly people with poor health live in institutions and poor economic families.

Religion: Religious variations for health condition among elderly population in Uttar Pradesh at regional level Odds ratio indicates Northern Upper Ganga Plains, Central region and Eastern region reports Muslim elderly are more chance to be hospitalise compared to Hindu elderly population. Those elderly belong to other religion in all regions have less chance to be hospitalised than Muslim and Hindu.

State of Economic Dependency:

State of economic dependency is the important variable in the shaping of the health status of the elderly population. Result of odds ratio indicates the elderly who are fully dependent on others having more chance to be hospitalise, compared to not dependent on others and partially dependent of others. Due to lack of poor economic status and proper care and support for elders in the family.

4.7. Conclusion:

This chapter provides the health condition and health care utilisation among the elderly population in Uttar Pradesh. The health of an individual play a predominant role in health conditions of the elderly population. The study indicates that older women live longer with a greater burden of diseases and physiological distress. The prevalence of chronic diseases among the aged are quite high and it is higher in the rural areas.

Problems of joint pain and coughs are the most severe diseases that the aged suffer. More elderly in urban area were found to be healthy than their rural counterparts. Literate elderly are healthier than illiterate elderly population in all the regions. Higher proportion of married elderly reported to be healthy compared to single or others. The problem of ageing and health in India is not just a medical problem. It is basically a socio-economic problem. The lack of social security and a comprehensive, Medicare system renders health care highly expensive. Most of the elderly in Uttar Pradesh being economically dependent for the cost of treatment on family is often a burden on the household. Therefore, many of the elderly ignore their ailments unless they become too acute. Thus, there is a great need for an appropriate insurance scheme for enabling the elderly to meet their medical expenses and better health utilisation services.

Chapter 5

Policies, and Programmes for Aged in India: A Critical Appraisal

Chapter: 5

Policies, and Programmes for Aged in India: A Critical Appraisal

This chapter presents the Policies and programmes for the elderly and examines how policies help in improving the welfare of the aged and provide the financial and social security to the destitute elderly persons in the country.

5.1. Introduction:

The elderly population is becoming a major concern for the policy makers all around the world for both developed and developing countries in the past few decades.

First World Assembly on ageing was held in 1982 and the adoption of Vienna International Plan marked the path of formulation of the national policy for the elderly in India. The Second Assembly on ageing was held at Madrid Spain in 2002 with the objective to guarantee economic and social security of older persons (Chattopadhyay, A. 2004)[1]. The Government of India in 1999 developed and adopted the National Policy for Older Persons. A National Council for Older Persons and an Inter-Ministerial Committee was set up to implement the policy directions.

Government of India introduced various schemes and initiatives to promote and protect the welfare for the elderly. These initiatives include financial assistance for the construction of and maintenance of old people's homes and non-institutional services to the elderly (Krishnaswamy, B and Venkataraman, K., 2008).[2]

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[1] Chattopadhyay, A., (2004). "Population Policy for the Aged in India", *Economic and Political Weekly*, Vol. 39, No. 43, pp. 94-96.

[2] Krishnaswamy, B and Venkataraman, K.., (2008). "Ageing in India", *Journal of Springer Science*, Vol, 32, pp, 258-268.

5.2. Policies for Elderly in the Colonial Period of India:

This pension system for government employees was created in 1881 by Royal Commission on Civil Establishment.

During the period from the mid 18th to mid 20th centuries, the British government was primarily concerned with maintaining law and order, which included the development of a beau racy, composed of both British and Indian civil servants. During the colonial period, the British policies dealing with social issues, thought about the institutionalisation and legislation has to be introduced in India. The British government established laws related to security in old age such as pensions and funds for the workers in formal employment sector. (Gokhale, S.D. 2003)[3]

Four major pieces of legislation were introduced from the 1870s to 1940s and were administered by the Royal Commission on Civil Establishment. Today, part XIV and, article 309 of the Constitution of India, sets forth recruitment and condition of service, including compulsory retirement at age 60. It applies for both central and state government employees. With respect to pensions the state legislatures alone have the authority to make amendments to any legislation.

5.3. The Workman's Compensation Act: (WCA, 1923)

According this act, compensation is payable for some occupational diseases contracted by workmen during the course of their occupation. All workers are covered in this act irrespective of their wage limit. The amount of compensation payable to dependents has been stated in schedule IV (section 3). The issues of social security became more important during the early 1940s. The Adarkar Commission Report was submitted on August 15, 1944 to outline the foundation for a social security scheme based on several principles. The Adarkar Commission Report laid the basis for the creation of various retirement income scheme and other social welfare programmes after independence of India in 1947. Particularly, the health insurance scheme proposed by the commission materialised in the scope of the Employees

[3] Gokhale, S.D., (2003). "Towards a Policy for Ageing in India", Journal *of Ageing and Social Policy*, Vol, 15, No 2/3, pp,213-234.(eds) Liebig, P.S. and Rajan, S.I., (2005). "An Aging in India: Perspectives, Prospects and Policies", New Delhi, Rawat Publications. pp, 213-234.

State Insurance Act of 1948 and was thoroughly amended in 1966 (Liebig, P.S and Rajan, S.I., 2003)[4]. The life corporation of India (LIC) introduced two schemes for the elderly people in order to give financial security after the age 60 or above years. Two life insurances, **Jeevan Akshay** and **Jeevan dhara,** were enacted to provide financial security for elderly in 1950s. After 1980s, some other schemes were introduced by the Government of India for the welfare of older persons. The new schemes of Jeevan Shree Plan, Jeevan Suraksha plan and Jeevan Sandhya were among other legislations passed in the first decades after independence, including Special Tax Benefit for elderly under the Income Tax Act of 1961 and the payment of Gratuity Act of 1972 and additional retirement benefits for industrial workers, pensions for freedom fighter who had fought for independence and that for the retired servicemen were also enacted.

5.4. Employees Family Pension Scheme (1971)

The scheme provides for a substantial long term protection to the family of the employee's who die in service. The minimum amount and the maximum amount of pension are Rs. 250 and Rs. 750 per month respectively. If a member of the family pension scheme dies after seven years of reckonable service. The widow gets family pension. The members of this scheme get two types of benefits in family pension, life assurance benefits and retirement-cum- withdrawal benefits.

Government of India introduced a pension scheme for freedom fighters in 1972 and about1.5 lakh freedom fighters received this pension. **Sainik Samman Pension Scheme (SSPS)** provides for a monthly pension of Rs 3,600 (Rajan, I., 2001)[5] for the elderly.

5.5. National Policy on Older Persons (NPOP 1999)

Government of India announced the National Policy for Older Persons in 1999 to reaffirm its commitment to ensure the well-being of the older persons in a holistic manner. Reiterating the mandate enshrined in Article 41 to the Constitution of India, the Policy has brought the concern for older persons on top of the National Agenda. The National Policy on Older persons (NPOP) seeks to move away from stereotyped welfare programmes and looks at

[4] Liebig, P.S, Rajan, S.I., (2003). "An Ageing India. Perspective Prospects and Policies", pp, 218-219.
[5] Rajan, I., (2001). "Social Assistance for Poor Elderly: How Effective", *Economic and Political Weekly,* Vol. 36, No. 8, pp. 613-617.

ways to empower the aged. The Ministry of Social Justice and Empowerment has been designated as the nodal ministry to co-ordinate all matters relating to the implementation of the policies (Clause 92). It has set up a National Council for Older Persons (Clause 95), a separate Bureau of Older Persons to look into the problem of the elderly persons (Clause 92).

- Policy also aims also at subsidising health care network with private sector involvement.
- Increasing standard tax deductions (rebate) for senior citizens of country.
- Strengthening legislation on parent's right to be supported by their children.

The policy explains the importance of research and training of manpower as well as the use of media and NGOs to deal with the problems of the aged in the country.

Objectives of the National Policy on Older Persons:

- Protection against abuse and exploitation of elders.
- Service to improve quality of care for elders.
- To provide care and protection to the vulnerable elderly people.
- to encourage families to take care of their older family members.
- to provide adequate healthcare facility to the elderly.

The Policy also appreciates the special needs of older persons and therefore lays emphasis on empowerment of community as well as individuals to meet the challenges of the process of ageing adequately.

The policy document is silent about these serious questions:

- According to (NPOP) special attention will be necessary to older females so that they do not become the victim of triple neglect of discrimination on account of gender, widowhood, age etc. and need for expansion of social and community services for older persons, particularly women Clause 17, (Srivastava, V., 2010).[6]
- A focus on the empowerment and active and productive involvement of older persons to ensure their contribution to family, community and society.

[6] Srivastava, V., (2010). "Women Ageing" (Social Work Intervention), New Delhi, Rawat Publications pp, 81-83.

5.6. The Hindu Adoptions and Maintenance Act 1956: (HAMA, 1956)

The Hindu adoption and maintenance act, 1956 in this section 20(3) provides for maintenance of aged or infirm parents. This is re-inforced by the maintenance and social welfare for parents and senior citizens act of 2007 which is more inclusive.

5.7. National Social Assistance Programme (NSAP, 1995)

In 1995, the Government adopted the National Social Assistance Programme (NSAP), which is made up of three programmes for older people of the country.

- The National Old Age Pension Scheme (NOAPS)
- The National Family Benefit Scheme (NFBS)
- The National Maternity Benefit Scheme (NMBS)

The NOAPS is a centrally-sponsored programme under this scheme, Criteria for the beneficiary.

- The age of the beneficiary (male or female) should be 65 years or more.
- The amount of the old age pension in 1995 was Rs 75 per month per beneficiary.

The NOAPS is implemented in the States and Union Territories through Panchayats and Municipalities. The National Old Age Pension Scheme has been renamed as Indira Gandhi National Old Age Pension Scheme (IGNOPS) in 2007. Pension under the Indira Gandhi National Old Age Pension Scheme (IGNOAPS) is Rs. 200/- per month per beneficiary and the State Governments may contribute over and above to this amount. It covered all persons over 65 who were living below the poverty line

Under NFBS an amount of Rs. 10000/- are provided as Central Assistance to the households below the poverty line.

5.8. National Council for Older Persons (NCOP, 1999)

National Council for Older Persons (1999) envisaged under section 95 of the NPOP, 1999 was established by the Government of India in May 1999. The major objectives of the NCOP are (Nayar, P.K.B, 2003)[7]

[7] Nayar, P.K.B., (2003). "Senior Grassroots Organisation in India", *Journal of Ageing and Social Policy*, Vol, 15, No 2/3, pp, 193-212.(eds) Liebig, P.S. and Rajan, S.I. (2005) An Aging in India. Perspectives, Prospects, and Policies. New Delhi, Rawat Publications. pp, 208-209.

- Provide feedback to government on implementation of the NPOP as well as on specific program initiatives for the senior citizens.
- Advocates the best interests of the older persons.
- Lobby for the concession of older persons.

5.9. National Old- Age Pension Schemes: (NOAPS, 1995)

On August 1995 the Government of India announced the National Old-Age Pension Scheme for the poor. The scheme covers those aged 65+ who are landless, destitute and or have no regular means of subsistence.

The assistance was initially Rs.75 month and later on revised to Rs.150. A few of the states have just revised the amount of pension by Rs.275 in Gujarat, Rs.300 in Delhi, Rs.400 in West Bengal and Rs.500 in Goa. In Rajasthan, the amount of pension is Rs.100 for females aged 55+ and males aged 58+, 200 for those age 65+ and Rs.300 for destitute couples. The scheme is being implemented in the states and Union Territories through panchayats and municipalities. (Help- age India 2002) [8]

5.10. Annapurna Scheme (1999)

The Government of India introduced a food security scheme for elderly called Annapurna in 1999. This scheme provides food security to the older persons, who though eligible, have remained uncovered under NOAPS. Under the Annapurna scheme 10 kilograms of food grains are provided to the beneficiary every month at no cost. It was implemented by the Ministry of Rural Development with the assistance of the Ministry of Food and Civil Supplies. The Government of India had allotted a sum of Rs 100 crore for the first year of its implementation.

5.11. Maintenance and Welfare of Parents and Senior Citizens Act: (MWPSC, 2007)

The Maintenance and Welfare of Parents and Senior Citizens Act, 2007 was enacted in December 2007 to ensure need based maintenance for parents and senior citizens of country. Making the Old Age Homes for aged and provides adequate medical facilities and economic security for older. The act notified only 22 states of the country. The principle promotes the basic right to older based on self- fulfilment and dignity. The counsel for the petitioner however pointed out that adequate steps had not taken by the two states like, Uttar Pradesh

[8] Help-Age India ., (2002)."*Senior Citizen Guide Revised Edition*", New Delhi, Research Division, Help-age.

and Haryana under the national policy. National old-age pension scheme for all senior citizens who are 65 years and below the poverty line, (Times of India, November, 2007). As approved by the cabinet is reportedly under reconsideration and the proposal is to include all such cases above 60 years and widows and handicapped (TOI, 2008) recently the supreme court heard a public interest litigation filed on 2004, seeking implementation of the national policy on older persons.

5.12. Critical Appraisal:

The policies do not explain the implementations of its objectives in financial matters. No deadline has been set up for the ultimate objectives. The policy only refers to the urban milieu and to the formal, organised sectors of employment (Sujaya, C.P., 1999)[9]. Regarding the socio-economic and health aspects of older persons, the policies talk about removing discrimination if any, against older persons in availing various opportunities. But these do not analyse the existing scenario. The National Policy of older persons was adopted by the Central Government in the year 1999 and is currently under review. The policy is only a model policy as it could not be directly implemented by the Central Government. The state Government had to adopt it to make it functional in their respective areas. In the last two decade not many Governments adopted it and very few took steps to deal with issues concerning elderly.

The only benefits available are non-contributory pension to destitute elderly and income tax benefits for lower income age groups and health insurance to poor elderly under various schemes. There is need to analyse and debate the policy document at various forums so that a progressive set of policies may be forged to improve the quality of care and the well being of older persons throughout India. The Ministry of Social Justice and Empowerment (MSJE), Government of India has commissioned Age-well Foundation to set up ***Aadhar*** as secretariat of National Council for Older Persons (NCOP). Aadhar is responsible for looking after the grievances of older persons and assist them in finding solutions. It has set up a nationwide Zila Aadhar network covering every district of the country with thousand of committed and concerned voluntary.

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[9] Sujaya, C.P., (1999). "Some Comments on National Policy on Older Persons", *Economic and Political Weekly,* Vol, 33, pp, 72-74.

5.13. Implementation of the Policy:

The Ministry of Social Justice and Empowerment (MSJE) is the nodal department of the Government of India for the matters relating to older persons. Each ministry is required to prepare Five-Year Plans and annual action plans about their implementation of aspect of the NPOP that fall into their jurisdiction. Target time frames and implementation of responsibilities to ensure that both age related and age based program benefit the elders.

The MSJE will prepare a detailed review of NPOP implementation in every three years. The Panchayati Raj institutions (village council) will encourage participation of NPOP implementation by addressing local level issues and needs of developing program for elderly population. (Liebig, P.S and Rajan, S.I. 2003)[10]

5.14. Responsibility for Implementation of Policies and Programmes:

The Ministries of Home Affairs, Ministry of Health and Family Welfare, Ministry of Rural Development, Ministry of Urban Development, Ministry of Labour, Panchayati Raj (Village Council) and Ministry of Women and Child Development will take the responsibilities for the implementation of policies and programmes for older persons. The annual report of these Ministries and Departments will indicate the progress achieved.

5.15. Conclusion:

Policy makers pay serious and special attention to older persons to improve their socio-economic conditions and health conditions in both developing and developed countries. Government of India introduced various plan and policies to promote the health and welfare of elderly peoples. This is joint responsibility of the state and Central Government to implement of the policy. The non-Governmental organisations such as Help Age India, Age-well Foundation etc, plays a vital role to determine social, financial condition and improve the living condition of the elderly in both rural and urban areas. Thus, there is a need for appropriate insurance schemes for the aged people for the life protection with regard to medical expenses for elderly population.

[10] Liebig, P.S and Rajan, S.I. , (2003). "An Ageing India: Perspective, Prospects and Policies", pp. 229-230.

Chapter 6

Summary and Conclusions

Chapter: 6

Summary and Conclusions

6.1 Introduction:

This study presents the socio-economic and health status of elderly population in India with a case study of Uttar Pradesh, which is based on the basis of data taken from Census of India (2001) and National Sample Survey Organisation (NSSO, 2004). In this study, attempts have been made to review the socio-economic and health status of elderly population in Uttar Pradesh.

There are about 77 million elderly populations in India individuals in the age group of 60 years and above and this elderly population is expected to increase to 114 million by 2016. Elderly in India reports the fastest growing age group in the population. India contains the second largest number of older persons in the world. Due to the advances in medical science improved health standard and better living condition there has been a steep rise in the elderly population. In India the elderly plays effective roles in the joint family system which provides them security and emotional support.

Most of elderly in Uttar Pradesh live in extreme poverty especially those located in rural areas. The decline of joint family system, migration of youth to cities and increasing coast of health care are few of the problems of aged in Uttar Pradesh. The increasing number and proportion of elderly have a direct impact on the demand for health care services and pension and social security system. The trend of the size and growth of the elderly population in the country indicate that ageing will become a major challenge in the future when vast resources will be need to for support care and treatment of the old.

The percent of aged population in India increased from 5.6 in 1961 to 7.5 in 2001. This lead to a change in the shape of the population pyramid form a very broad based one in 1961 to a pyramid with shrunken base in 2001. The base is expected to shrink further in the years to come. The quantum of population ageing has important implications for government policies such as pension schemes, old-age homes, health care and economic growth.

6.2 Summary of the chapters

The present study has been divided into six chapters. The present chapter is the last one. The summary of the salient aspects of the present study and analysis major findings of each chapter are given below.

Chapter, 2 entitled *Demographic Status of Elderly Population in India and Uttar Pradesh.* Presents an analysis has been attempted to depict of how demographic trends have reveals that the population growth is more rapid among the older age groups in India and Uttar Pradesh. Though the percentage of elderly to the total population is estimated around 7.45 percent, their number increased from 37 million in 1951 to about 77 million in 2001. The 2001 Census results indicate that in India, population ageing was highest in Kerala followed by Himachal Pradesh, Punjab, Haryana, Tamil Nadu, Andhra Pradesh, Orissa and Maharashtra. These states have higher elderly population than that of the national average. The lowest percentage of elderly population reported in North-Eastern region of the country.

The proportion of elderly is found higher in rural areas compared to urban areas. It also observed that the proportion of elderly population is more among females than males in India as well as in Uttar Pradesh. The index of ageing has increased from 13.08 in 1991 to 19.84 in 2001. In Uttar Pradesh, the proportion of elderly has increased from 6.22 in 1961 to 7.01 in 2001. Highest percentages of aged are found in the Eastern region of the Uttar Pradesh, followed by the Southern region and Central region. The lowest proportions are observed in the Northern Upper Ganga Plains. Issues like providing their basic needs income security, living arrangement, and health care services for the aged have been dealt in this study. Population aged in urban areas is likely to strain the joint family system and create insecurity among the aged.

In the Chapter 3, entitled *Socio-Economic Status of Elderly Population in India and Uttar Pradesh*, an attempt has been made to analyse the socio-economic status of elderly population. life expectancy and health improvement has increased the potential of self-reliance and for contributors to socio-economic development among the elderly. The reduction in labour force participation of the elderly highlights their employment and income insecurity. The elderly have problems in rural areas with a large number of young people migrants to urban areas.

Social security systems have become major elements of social development in the century having important effects on the well being of the older groups of society.

Social problems such as prolonged and high percentage of widowhood, social support, greater dependency among elderly population and especially elderly women will be affected much. Socio-economic support for older people is a critical area of intervention especially for those belonging to the weaker section. Sex difference in marital status is reflection of several underlying factors such as women living longer than men, women tending to marry men older than themselves and the higher chance of remarriage among men. The literacy rate for the elderly is much lower especially for women. Elderly women face more economic problems due to the relatively low pensions, fewer opportunities for employment, death of spouse and difficulties faced in living arrangement. The rural elderly females who are socially, economically and educationally disadvantaged may suffer from such problems.

The analysis of economic aspects of the elderly population reveals that a higher proportion of the rural aged reported to have less income than their expenditure. As result, a large number of aged in the rural areas are economically dependent. Moreover a much lower proportion of the aged in rural areas had savings. The economic status of the urban aged is clearly higher than the aged in rural areas of Uttar Pradesh. Work participation rate of elderly population is higher in the Eastern region followed by, Southern region, and the Central region. The lowest work participation rate is found in Northern Upper Ganga plains.

Next attempt has been made to explore the health status of the elderly population in Uttar Pradesh in the Chapter, 4 entitled *'Health Conditions and Health Care Utilisation of Elderly in Uttar Pradesh'* Health conditions of elderly tend to deteriorate with advancing age and very often due to neglect, poor economic status and social deprivation. Poverty and illiteracy worsen the health status and impact the health care of elderly population. Generally the health behaviour of older people has been found to be poor particularly in rural areas as compared to their urban counterparts.

Health condition of elderly in Uttar Pradesh is lower than general population and they need care and family support. The proportion of elderly suffering from different chronic diseases is significantly higher among males than females. Due to lack of mobility, inadequate, accessible health care services and lack of familial and societal support the elderly are vulnerable to many psychological problems at older ages. Education has a

significant role in determining the health status of the elderly. In Uttar Pradesh, illiterate people reported higher morbidity than the literate people. Marital status of elderly plays an important role in shaping the health status of elderly. Married elderly are in better health compared with the never-married and divorced or separated. The attempt has also been made to probe into the underlying reasons for the preference for the private health facility, although the public health facility is much cheaper. Present study indicates that Cardio-vascular diseases (CVD) accounts for one third of the elderly mortality followed by respiratory disorders (about 10 per cent) and infectious diseases such as tuberculosis and lung infections. Other diseases like, disability and gastro-intestinal have affected the pattern of diseases among elderly population in Uttar Pradesh. Major challenges the societies face are how to maintain health and quality of life (QOL) of the elderly.

The results reveal that in case of both inpatient and outpatient care, private facility is the most frequently used source of treatment in Uttar Pradesh. Treatment for the elderly is a difficult task particularly for the elderly in rural areas. Rehabilitation of elderly should be as important as treatment, care and medicine. With regard to health care services, geriatric specialists should provide treatment to the elderly population in Uttar Pradesh.

In the Chapter 5, entitled *'Policy and Programme for Aged Persons in India'* the national policy on older persons by the government of India solicits active participate of the volunteers in providing care to the elderly. It talks of encouraging voluntary organisation for providing institutional and other services to the elderly in India. Policy should identify needs recognize right to the benefits of development provide the framework for the development of appropriate social security and social services and have sufficient funding.

National policy should recognize the potentials of aged to contribute to development. The state is required to intensify its effort by introducing appropriate policy interventions and earmarking adequate resources for taking care of older people in the future. The Panchayat Raj (Village council) and Nagar Palika Bill have an appropriate role to play in shaping the elderly in the future.

6.3 Concluding Remarks:

The combination of high fertility and decline in mortality during the 20th century has resulted in a large and rapid increase in the population of older persons as successively larger cohorts step into old-age. Furthermore, sharp decline in fertility experienced in recent times is bound

to lead to an increased proportion of older people in the future. This work is an attempt in this regard.

The process of population ageing in the country affected more the southern part of the country, but in Uttar Pradesh seems as if it will take some more time to draw the attention to both planners and policy makers. But on the other hand, Uttar Pradesh has the largest elderly population in term of absolute numbers. This scenario indicates the both state and Central Government to draw the special attention towards the elderly population in the near future in Uttar Pradesh.

The significant reduction in the death rates and the improvements in the life expectancy have leads to more number of elderly in the country and Uttar Pradesh. The trend in the size and growth of elderly population in the India and Uttar Pradesh indicates that elderly will become a major social challenge in the future when vast resources will be need to be directed towards the care and treatment of the old. Most of the elderly are economically dependent on others most commonly on their children or other relatives. Some are dependent on charitable trusts and religious institutions. Their most glaring need of elderly is proper care and support.

The finding reveals that demographic and socio-economic factors have an important role in determining the health status of elderly. There is the need to develop proper approach to minimise the chronic diseases and improving quality of life of elderly. The Life Insurance Corporation (LIC) of India and other insurance agencies with the help of Government of India should introduce schemes to insure all citizens in the country so that they can get some financial and medical support in old age. Also, all efforts should be made to have old-age homes for the destitute elderly people. The government should take serious steps to enhance the retirement age to 65 years.

Most of the elderly people could have better health if they have received better health care and healthy life style. Diseases like joint problem, cardiovascular and disability are one of the major health problem faced by elderly followed by failing eyesight and problems of cough. Finally, findings of the study suggest that the existing programmes for the welfare of the elderly mostly focus on three important aspects like, social security, economic security and health status as well as health care utilisation among the elderly population in Uttar Pradesh.

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Appendix

Appendix 1.1

Birth Rates, Death Rates and Natural Rates India, 1972-2009

Decade-Years	Birth Rates	Death Rates	Natural Growth Rates
1972	36.3	15.9	20.4
1976	34.2	15.2	19.1
1981	33.8	12.3	21.5
1986	32.6	11.3	21.3
1990	30	9.9	20.1
1991	29.3	9.9	19.4
1992	29.1	9.7	19.7
1993	29.8	9.5	19.3
1994	28.5	9.2	19.3
1995	28.1	9.1	19
1996	27.7	9	18.7
1997	27.1	9	18.1
1998	26.6	9	17.6
1999	26.1	8.7	17.4
2000	25.8	8.5	17.3
2001	25.4	8.3	17.1
2002	25.1	7.9	16.9
2003	24.6	7.9	16.7
2004	24.2	7.7	16.5
2005	23.8	7.6	16.2
2006	23.8	7.5	16.3
2007	23.1	7.4	15.7
2008	22.8	7.4	15.4
2009	22.5	7.3	15.2

Source: Sample Registration System, 1972-2009 (SRS)

Appendix 1.2
Birth Rates, Death Rates and Natural Rates Uttar Pradesh, 1972- 2009

Decade-Years	Birth Rates	Death Rates	Natural Growth Rates
1972	43.2	21.7	21.5
1976	41.2	20.7	20.5
1981	39.2	16	23.2
1986	37.7	15	22.7
1990	35.9	12	23.9
1991	35.1	12.1	23
1992	36	11.9	24.1
1993	35.9	11.8	24.1
1994	35.4	10.9	24.5
1995	34.7	10.5	24.2
1996	34.1	10.3	23.8
1997	33.3	10.4	22.9
1998	32.7	10.4	22.3
1999	32.4	10.4	22
2000	32.8	10.3	22.5
2001	32.2	10.1	22.1
2002	31.7	9.8	21.9
2003	31.2	9.3	21.9
2004	30.8	8.8	22
2005	30.4	8.7	21.7
2006	30.1	8.6	21.4
2007	29.5	8.5	21
2008	29.1	8.4	20.7
2009	28.7	8.2	20.5

Source: Sample Registration System, 1972-2009 (SRS)

Appendix 24

Proportion of Elderly Population in Total Population by Sex and Residence in India, 2001

state name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
India	7.45	7.83	7.83	7.74	7.43	8.06	6.70	6.25	7.21
Jammu & Kashmir	6.66	6.82	6.47	6.76	7.06	6.43	6.36	6.16	6.61
Himachal Pradesh	9.01	9.25	9.31	9.31	9.12	9.50	6.25	5.85	6.76
Punjab	9.00	9.50	9.82	9.82	9.46	10.23	7.39	6.85	8.03
Chandigarh	4.99	5.38	3.23	3.23	3.01	3.59	5.19	4.90	5.55
Uttaranchal	7.71	7.87	8.29	8.29	8.22	8.36	6.03	5.77	6.33
Haryana	7.49	8.06	7.93	7.93	7.47	8.46	6.41	5.86	7.07
Delhi	5.20	5.66	4.53	4.53	4.20	4.93	5.24	4.86	5.71
Rajasthan	6.74	7.31	6.99	6.99	6.47	7.54	5.95	5.41	6.55
Uttar Pradesh	7.01	6.96	7.31	7.31	7.41	7.20	5.86	5.69	6.06
Bihar	6.63	6.49	6.68	6.68	6.84	6.51	6.17	6.06	6.29
Sikkim	5.37	5.01	5.55	5.55	5.91	5.14	3.91	3.89	3.93
Arunachal Pradesh	4.55	4.54	5.28	5.28	5.34	5.23	1.73	1.72	1.74
Nagaland	4.54	4.20	4.94	4.94	5.27	4.57	2.63	2.90	2.31
Manipur	6.71	6.74	6.41	6.41	6.46	6.37	7.54	7.31	7.76
Mizoram	5.52	5.64	5.74	5.74	5.72	5.75	5.29	5.07	5.53
Tripura	7.27	7.70	7.18	7.18	6.82	7.56	7.70	7.05	8.39
Meghalaya	4.56	4.53	4.60	4.60	4.71	4.48	4.41	4.10	4.72
Assam	5.85	5.90	5.86	5.86	5.83	5.90	5.79	5.68	5.91
West Bengal	7.11	7.53	6.59	6.59	6.13	7.08	8.44	8.18	8.73
Jharkhand	5.86	6.06	6.09	6.09	5.89	6.29	5.07	4.93	5.22
Orissa	8.26	8.47	8.58	8.58	8.40	8.77	6.43	6.20	6.68
Chhattisgarh	7.22	7.86	7.63	7.63	6.95	8.31	5.58	5.18	6.02
Madhya Pradesh	7.09	7.57	7.36	7.36	6.95	7.80	6.36	5.85	6.94
Gujarat	6.91	7.70	7.31	7.31	6.57	8.08	6.23	5.52	7.04
Daman & Diu	5.08	7.19	3.74	3.74	2.56	5.75	7.45	5.86	9.07
Dadra & Nagar Haveli	4.00	4.99	4.29	4.29	3.41	5.32	3.02	2.53	3.74
Maharashtra	8.73	9.73	10.24	10.24	9.23	11.28	6.68	5.95	7.52
Andhra Pradesh	7.59	8.04	8.13	8.13	7.70	8.57	6.16	5.72	6.62
Karnataka	7.69	8.24	8.28	8.28	7.71	8.87	6.53	6.09	7.00
Goa	8.33	9.48	9.08	9.08	7.82	10.35	7.58	6.65	8.57
Lakshadweep	6.15	6.25	5.65	5.65	5.47	5.84	6.77	6.77	6.77
Kerala	10.48	11.31	10.52	10.52	9.70	11.29	10.36	9.31	11.36
Tamil Nadu	8.83	8.94	9.23	9.23	9.22	9.24	8.31	8.08	8.55
Pondicherry	8.31	9.14	8.25	8.25	7.75	8.76	8.35	7.36	9.33
Andaman& Nicobar Islands	4.88	4.62	5.49	5.49	5.81	5.11	3.61	3.65	3.57

Source: Census of India 2001. C- Series Social and Cultural Tables

Appendix 2.5

Proportion of Elderly Population in Uttar Pradesh in Total Population by Residence and Sex 2001

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
Uttar Pradesh	7.01	7.05	6.96	7.31	7.41	7.20	5.86	5.69	6.06
Saharanpur	6.58	6.75	6.49	6.75	6.92	6.55	6.08	5.88	6.31
Muzaffarnagar	6.88	7.11	6.72	7.11	7.33	6.86	6.19	6.10	6.29
Bijnor	6.39	6.55	6.32	6.55	6.69	6.40	5.90	5.75	6.08
Moradabad	5.65	5.84	5.62	5.84	5.92	5.75	5.21	5.11	5.32
Rampur	5.38	5.34	5.37	5.34	5.42	5.25	5.49	5.27	5.73
Jyotiba Phule Nagar	6.25	6.55	6.20	6.55	6.67	6.41	5.33	5.14	5.53
Meerut	6.36	6.96	6.45	6.96	6.96	6.96	5.71	5.54	5.91
Baghpat	8.18	8.55	7.81	8.55	8.93	8.10	6.64	6.64	6.63
Ghaziabad	5.58	6.35	5.76	6.35	6.20	6.52	4.96	4.80	5.14
Gautam Buddha Nagar	6.41	6.98	6.71	6.98	6.69	7.33	5.45	5.28	5.65
Bulandshahr	7.16	7.56	7.61	7.56	7.15	8.02	5.85	5.50	6.25
Aligarh	6.91	7.40	7.25	7.40	7.09	7.77	5.69	5.44	5.98
Hathras	7.24	7.45	7.62	7.45	7.15	7.81	6.36	5.89	6.90
Mathura	6.98	7.02	7.24	7.02	6.86	7.22	6.87	6.52	7.28
Agra	5.73	6.32	5.82	6.32	6.25	6.41	4.95	4.85	5.06
Firozabad	6.34	6.75	6.48	6.75	6.63	6.90	5.38	5.23	5.56
Etah	6.89	7.08	7.12	7.08	6.93	7.26	5.97	5.57	6.43
Mainpuri	7.15	7.33	7.13	7.33	7.37	7.28	6.13	5.98	6.28
Budaun	6.23	6.39	6.65	6.39	6.05	6.80	5.52	5.08	6.02
Bareilly	5.73	5.90	5.89	5.90	5.77	6.06	5.37	5.21	5.55
Pilibhit	6.04	6.15	6.15	6.15	6.09	6.21	5.54	5.23	5.88
Shahjahanpur	6.13	6.30	6.21	6.30	6.28	6.32	5.46	5.19	5.78
Kheri	6.55	6.65	6.56	6.65	6.67	6.63	5.71	5.45	6.00
Sitapur	7.10	7.26	7.25	7.26	7.14	7.40	5.88	5.65	6.15
Hardoi	6.86	6.99	7.19	6.99	6.72	7.31	5.93	5.55	6.36
Unnao	7.48	7.76	7.78	7.76	7.50	8.06	5.91	5.64	6.22
Lucknow	6.47	7.25	6.66	7.25	6.95	7.58	6.02	5.93	6.13
Rae Bareli	7.57	7.80	7.69	7.80	7.72	7.89	5.37	5.07	5.71
Farrukhabad	6.38	6.50	6.42	6.50	6.54	6.46	5.92	5.62	6.26
Kannauj	6.68	6.91	6.82	6.91	6.82	7.01	5.56	5.24	5.91
Etawah	7.78	8.13	7.79	8.13	8.17	8.07	6.64	6.42	6.89
Auraiya	7.55	7.72	7.52	7.72	7.76	7.67	6.51	6.42	6.62
Kanpur Dehat	7.97	8.06	7.87	8.06	8.16	7.95	6.74	6.62	6.88
Kanpur Nagar	6.61	7.71	6.60	7.71	7.74	7.67	6.07	6.07	6.07
Jalaun	8.35	8.78	8.34	8.78	8.87	8.67	6.94	6.68	7.24
Jhansi	7.15	7.63	7.64	7.63	7.36	7.94	6.46	5.80	7.22

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
Lalitpur	6.54	6.61	6.73	6.61	6.53	6.71	6.10	5.41	6.87
Hamirpur	8.05	8.30	8.09	8.30	8.34	8.26	6.80	6.40	7.26
Mahoba	7.88	8.09	7.96	8.09	8.13	8.03	7.16	6.69	7.69
Banda	7.61	7.81	7.50	7.81	7.99	7.61	6.53	6.21	6.91
Chitrakoot	7.18	7.27	6.89	7.27	7.56	6.93	6.35	6.17	6.55
Fatehpur	7.49	7.62	7.32	7.62	7.81	7.42	6.32	6.24	6.41
Pratapgarh	8.14	8.24	7.73	8.24	8.69	7.80	6.24	6.09	6.40
Kaushambi	6.69	6.71	6.42	6.71	6.97	6.42	6.40	6.39	6.41
Allahabad	6.37	6.41	6.15	6.41	6.72	6.08	6.23	6.09	6.40
Barabanki	7.30	7.43	7.48	7.43	7.29	7.60	6.03	5.77	6.33
Faizabad	7.60	7.70	7.51	7.70	7.81	7.59	6.96	6.93	7.00
Ambedkar Nagar	7.86	8.05	7.44	8.05	8.52	7.57	5.91	5.75	6.07
Sultanpur	7.99	8.10	7.76	8.10	8.35	7.84	5.73	5.53	5.96
Bahraich	6.63	6.74	6.62	6.74	6.79	6.68	5.65	5.28	6.08
Shrawasti	7.38	7.42	7.22	7.42	7.57	7.24	6.12	5.85	6.42
Balrampur	7.31	7.41	6.93	7.41	7.79	6.98	6.26	6.10	6.44
Gonda	7.17	7.32	7.00	7.32	7.51	7.10	5.27	4.90	5.70
Siddharth Nagar	7.54	7.61	6.95	7.61	8.20	6.99	5.89	5.77	6.02
Basti	7.93	8.04	7.35	8.04	8.62	7.42	6.02	5.95	6.09
Sant Kabir Nagar	7.78	7.89	7.25	7.89	8.45	7.32	6.30	6.28	6.32
Maharajganj	7.24	7.32	6.96	7.32	7.60	7.01	5.93	5.72	6.16
Gorakhpur	7.63	7.96	7.24	7.96	8.43	7.48	6.27	6.30	6.23
Kushinagar	7.24	7.31	6.91	7.31	7.66	6.95	5.89	5.77	6.02
Deoria	8.14	8.28	7.73	8.28	8.74	7.83	6.82	6.85	6.77
Azamgarh	7.98	8.14	7.42	8.14	8.76	7.54	6.03	6.17	5.88
Mau	7.63	8.10	7.13	8.10	8.70	7.50	5.70	5.83	5.57
Ballia	8.27	8.38	7.90	8.38	8.77	7.96	7.28	7.27	7.29
Jaunpur	7.92	8.06	7.61	8.06	8.43	7.69	6.15	5.84	6.49
Ghazipur	7.98	8.10	7.65	8.10	8.47	7.73	6.54	6.47	6.62
Chandauli	7.42	7.59	7.34	7.59	7.71	7.47	5.92	5.65	6.23
Varanasi	6.81	7.13	6.75	7.13	7.24	7.01	6.34	6.34	6.35
Sant Ravidas Nagar	6.78	6.94	6.63	6.94	7.14	6.73	5.70	5.51	5.93
Mirzapur	7.05	7.15	7.10	7.15	7.16	7.15	6.40	6.04	6.81
Sonbhadra	5.95	6.67	5.76	6.67	6.97	6.33	2.86	2.64	3.13

Source: Census of India 2001. C- Series Social and Cultural Tables

Appendix 2.5
State Wise Index of ageing by Sex and Residence in Uttar Pradesh, 2001

State-Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
India	19.84	18.72	21.07	19.65	18.60	20.81	20.43	19.11	21.89
Uttar Pradesh	17.25	17.29	17.19	17.50	17.63	17.36	16.14	15.85	16.46
Saharanpur	16.35	16.54	16.12	16.25	16.64	15.80	16.65	16.19	17.18
Muzaffarnagar	16.64	16.92	16.31	16.81	17.29	16.26	16.09	15.77	16.46
Bijnor	15.03	15.25	14.79	15.28	15.64	14.87	14.23	13.96	14.53
Moradabad	13.00	13.10	12.89	12.93	13.11	12.73	13.19	13.09	13.30
Rampur	12.31	12.51	12.10	11.85	12.20	11.45	13.95	13.63	14.30
Jyotiba Phule Nagar	14.09	14.20	13.96	14.51	14.75	14.22	12.70	12.35	13.09
Meerut	15.83	15.61	16.08	16.41	16.36	16.46	15.15	14.73	15.64
Baghpat	20.31	21.16	19.30	21.12	22.21	19.85	16.91	16.81	17.03
Ghaziabad	14.65	14.28	15.08	15.25	14.90	15.66	14.10	13.72	14.55
Gautam Buddha Nagar	16.34	15.80	16.98	16.78	16.07	17.62	15.48	15.27	15.73
Bulandshahr	18.49	17.45	19.69	18.45	17.40	19.67	18.62	17.64	19.76
Aligarh	16.49	15.87	17.22	17.13	16.47	17.92	14.76	14.23	15.36
Hathras	17.23	16.56	18.01	17.43	16.87	18.08	16.37	15.18	17.72
Mathura	16.43	16.05	16.88	15.78	15.51	16.10	18.36	17.66	19.18
Agra	14.98	14.80	15.21	15.08	14.92	15.27	14.84	14.62	15.12
Firozabad	14.96	14.70	15.27	15.63	15.39	15.92	13.33	12.98	13.73
Etah	16.03	15.65	16.49	16.29	16.02	16.62	14.71	13.71	15.85
Mainpuri	16.99	17.06	16.92	17.23	17.38	17.06	15.50	15.03	16.04
Budaun	13.98	13.17	14.95	14.18	13.40	15.11	13.03	11.99	14.21
Bareilly	13.01	12.77	13.28	12.78	12.58	13.02	13.55	13.23	13.91
Pilibhit	14.01	13.98	14.03	13.95	14.03	13.86	14.30	13.73	14.93
Shahjahanpur	14.44	14.44	14.45	14.59	14.75	14.39	13.85	13.14	14.68
Kheri	16.22	16.33	16.09	16.28	16.46	16.08	15.63	15.16	16.17
Sitapur	16.64	16.43	16.89	16.91	16.73	17.12	14.54	14.02	15.11
Hardoi	16.21	15.70	16.81	16.42	15.96	16.97	14.56	13.67	15.57
Unnao	18.43	17.94	18.98	18.81	18.32	19.35	16.17	15.64	16.76
Lucknow	18.16	17.96	18.38	17.24	16.73	17.80	18.84	18.86	18.81
Rae Bareli	18.24	17.76	18.77	18.62	18.16	19.13	14.27	13.53	15.07
Farrukhabad	16.12	16.16	16.06	16.18	16.42	15.90	15.86	15.12	16.71
Kannauj	15.71	15.59	15.85	16.15	16.15	16.15	13.43	12.66	14.30
Etawah	19.24	19.35	19.10	19.61	19.93	19.24	17.84	17.19	18.58
Auraiya	18.23	18.53	17.90	18.41	18.77	17.99	17.09	16.89	17.31
Kanpur Dehat	22.52	23.33	21.61	22.35	23.20	21.39	25.01	25.17	24.82
Kanpur Nagar	22.58	23.25	21.81	26.35	27.22	25.37	20.34	20.91	19.69
Jalaun	21.67	21.89	21.42	22.60	23.05	22.09	18.50	17.91	19.18
Jhansi	20.14	19.03	21.42	20.39	19.62	21.28	19.74	18.08	21.64
Lalitpur	15.57	15.16	16.04	15.47	15.26	15.71	16.22	14.47	18.20

State-Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
Hamirpur	20.40	20.62	20.14	20.80	21.24	20.29	18.23	17.32	19.29
Mahoba	19.85	19.75	19.98	20.27	20.43	20.08	18.33	17.20	19.61
Banda	18.33	18.67	17.92	18.48	18.98	17.91	17.42	16.89	18.02
Chitrakoot	16.63	17.31	15.85	16.69	17.45	15.83	15.98	15.90	16.08
Fatehpur	18.05	18.52	17.54	18.20	18.73	17.62	16.62	16.52	16.72
Pratapgarh	19.57	19.82	19.30	19.74	20.02	19.44	16.28	15.97	16.61
Kaushambi	15.20	15.76	14.57	15.18	15.76	14.54	15.41	15.74	15.06
Allahabad	18.14	18.86	17.33	17.48	18.23	16.64	20.94	21.50	20.30
Barabanki	17.97	17.75	18.22	18.18	17.99	18.39	15.87	15.25	16.56
Faizabad	18.37	18.43	18.31	18.25	18.24	18.26	19.29	19.83	18.68
Ambedkar Nagar	18.69	19.26	18.08	19.11	19.76	18.42	14.26	14.00	14.54
Sultanpur	19.68	19.66	19.70	19.82	19.83	19.81	16.49	15.91	17.14
Bahraich	15.72	15.78	15.66	15.88	16.03	15.72	14.17	13.31	15.13
Shrawasti	17.80	17.88	17.71	17.89	17.98	17.78	14.63	14.16	15.15
Balrampur	17.19	17.79	16.49	17.25	17.91	16.48	16.41	16.23	16.61
Gonda	16.90	17.07	16.71	17.11	17.35	16.84	13.89	13.12	14.81
Siddharthnagar	16.84	17.80	15.79	16.95	17.95	15.85	13.92	13.80	14.05
Basti	18.67	19.72	17.53	18.77	19.87	17.57	16.68	16.65	16.72
Sant Kabir Nagar	17.81	18.51	17.07	18.03	18.78	17.22	14.82	14.75	14.91
Maharajganj	17.99	18.55	17.38	18.12	18.72	17.47	15.31	14.98	15.67
Gorakhpur	18.21	18.76	17.62	18.38	18.96	17.75	17.38	17.76	16.96
Kushinagar	16.68	17.12	16.21	16.76	17.23	16.26	14.97	14.79	15.16
Deoria	19.47	19.79	19.13	19.57	19.91	19.21	18.45	18.61	18.28
Azamgarh	19.63	20.15	19.07	19.95	20.48	19.40	15.44	15.91	14.94
Mau	17.71	18.39	16.97	18.77	19.55	17.95	13.27	13.58	12.92
Ballia	20.50	20.91	20.05	20.60	21.05	20.10	19.48	19.49	19.46
Jaunpur	22.30	21.97	22.66	22.74	22.45	23.06	16.26	15.48	17.13
Ghazipur	18.79	18.95	18.62	18.90	19.07	18.71	17.46	17.40	17.53
Chandauli	18.02	18.04	18.01	18.31	18.37	18.26	15.33	14.97	15.73
Varanasi	17.53	17.71	17.33	17.51	17.56	17.45	17.57	17.96	17.14
Sant Ravidas Nagar	15.25	15.15	15.37	15.54	15.48	15.62	13.22	12.82	13.67
Mirzapur	16.35	16.15	16.58	16.34	16.21	16.47	16.48	15.72	17.33
Sonbhadra	13.89	14.39	13.33	15.14	15.83	14.38	7.65	7.34	8.00

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.1.6
Proportion of Marital Status among Elderly Population by Age and Sex in India, 2001

Age-group		Never married			Married			Widowed			Divorced/Separated		
		T	M	F		M	F	T	M	F	T	M	F
Total	60-64	0.08	0.09	0.07	4.28	5.15	3.43	15.69	13.73	16.25	3.78	4.61	3.43
	65-69	0.06	0.07	0.06	2.90	3.48	2.33	13.24	12.13	13.55	2.41	3.10	2.12
	70-74	0.06	0.07	0.05	1.81	2.59	1.05	13.32	13.55	13.25	1.69	2.46	1.37
	75-79	0.03	0.04	0.03	0.79	1.06	0.52	6.10	7.10	5.81	0.71	1.11	0.54
	80+	0.07	0.07	0.06	0.77	1.10	0.44	9.22	11.66	8.53	0.91	1.41	0.69
Rural	60-64	0.07	0.09	0.06	4.47	5.37	3.60	16.06	13.99	16.69	3.86	4.83	3.44
	65-69	0.06	0.07	0.05	3.02	3.62	2.45	13.35	12.12	13.72	2.46	3.23	2.13
	70-74	0.05	0.06	0.04	1.91	2.76	1.10	13.62	13.61	13.63	1.72	2.57	1.36
	75-79	0.03	0.03	0.02	0.82	1.10	0.55	6.00	6.82	5.74	0.70	1.12	0.52
	80+	0.07	0.07	0.06	0.81	1.18	0.45	9.28	11.48	8.60	0.90	1.44	0.67
Urban	60-64	0.09	0.09	0.10	3.82	4.63	2.98	14.67	12.80	15.09	3.55	3.92	3.40
	65-69	0.07	0.07	0.08	2.57	3.12	2.01	12.93	12.16	13.10	2.28	2.69	2.11
	70-74	0.07	0.07	0.07	1.55	2.16	0.93	12.45	13.31	12.26	1.61	2.12	1.40
	75-79	0.04	0.04	0.04	0.70	0.96	0.43	6.38	8.09	6.00	0.74	1.06	0.61
	80+	0.08	0.08	0.08	0.66	0.91	0.39	9.07	12.31	8.34	0.93	1.32	0.77

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.1.6 (A)

Proportion of Marital Status among Elderly Population by Age and Sex in Uttar Pradesh, 2001

Age-group		Never-Married			Married			Widowed			Divorced/Separated		
		T	M	F		M	F	T	M	F	T	M	F
Total	60-64	0.11	0.14	0.06	4.50	5.36	3.68	16.32	13.93	17.77	3.53	3.84	3.16
	65-69	0.08	0.11	0.05	2.93	3.32	2.54	12.33	11.05	13.10	2.00	2.17	1.80
	70-74	0.07	0.09	0.04	1.89	2.63	1.18	13.76	12.67	14.42	1.56	1.73	1.35
	75-79	0.03	0.04	0.02	0.80	0.98	0.64	5.63	5.91	5.45	0.54	0.64	0.43
	80+	0.10	0.11	0.09	0.83	1.15	0.52	9.74	10.37	9.36	0.97	1.16	0.74
Rural	60-64	0.11	0.16	0.05	4.66	5.55	3.81	16.59	14.08	18.24	3.74	3.95	3.45
	65-69	0.09	0.12	0.05	3.02	3.42	2.64	12.35	11.02	13.23	2.13	2.23	1.98
	70-74	0.07	0.09	0.03	1.97	2.76	1.23	14.02	12.73	14.86	1.68	1.82	1.50
	75-79	0.03	0.04	0.02	0.84	1.01	0.67	5.60	5.80	5.47	0.58	0.66	0.47
	80+	0.10	0.11	0.08	0.86	1.21	0.54	9.87	10.29	9.59	1.01	1.17	0.81
Urban	60-64	0.08	0.09	0.07	3.87	4.61	3.12	15.13	13.04	16.01	2.70	3.23	2.37
	65-69	0.07	0.07	0.06	2.55	2.95	2.15	12.21	11.23	12.62	1.51	1.78	1.33
	70-74	0.06	0.07	0.06	1.56	2.11	1.00	12.64	12.33	12.77	1.06	1.22	0.96
	75-79	0.04	0.04	0.03	0.68	0.85	0.50	5.74	6.57	5.39	0.41	0.53	0.34
	80+	0.10	0.10	0.09	0.68	0.92	0.44	9.20	10.81	8.52	0.79	1.15	0.56

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.1. 6. (B)
Marital status of Elderly Population in Uttar Pradesh District-Wise, 2001

State Name	Never married			Married			Widowed			Divorced/Separated		
	T	M	F	T	M	F	T	M	F	T	M	F
India	0.30	0.33	0.26	10.55	13.38	7.77	57.57	58.16	57.40	9.51	12.69	8.16
Uttar Pradesh	0.39	0.49	0.25	10.95	13.43	8.56	57.77	53.93	60.10	8.60	9.55	7.49
Saharanpur	0.35	0.43	0.25	10.95	13.07	8.82	58.28	59.07	57.77	9.69	10.29	9.02
Muzaffarnagar	0.39	0.53	0.22	11.46	13.65	9.29	59.84	61.64	58.67	10.15	11.35	8.89
Bijnor	0.28	0.35	0.20	11.18	13.42	8.99	60.12	60.07	60.16	8.12	9.88	6.53
Moradabad	0.28	0.33	0.22	9.73	11.99	7.48	55.44	53.35	56.63	8.48	9.61	7.44
Rampur	0.31	0.35	0.26	9.28	11.55	7.00	55.13	52.25	56.68	7.23	8.16	6.38
Jyotiba Phule Nagar	0.29	0.37	0.19	10.78	12.96	8.63	58.02	55.96	59.27	6.87	6.98	6.76
Meerut	0.37	0.46	0.26	10.40	12.49	8.29	58.52	59.84	57.85	8.05	7.94	8.15
Baghpat	0.73	1.10	0.20	13.45	16.04	10.91	64.06	67.00	62.00	11.56	11.25	11.95
Ghaziabad	0.30	0.35	0.24	8.89	10.65	7.11	56.66	57.41	56.32	7.62	7.46	7.76
Gautam Buddha Nagar	0.35	0.41	0.25	10.23	12.02	8.37	59.35	58.64	59.68	7.35	6.72	7.91
Bulandshahr	0.33	0.40	0.24	11.67	13.94	9.47	58.58	56.80	59.40	9.26	10.14	8.38
Aligarh	0.40	0.47	0.29	11.29	13.61	8.99	57.13	53.76	58.80	8.06	9.19	7.06
Hathras	0.49	0.61	0.32	11.36	13.64	9.11	57.74	52.96	60.30	8.82	9.50	8.03
Mathura	0.57	0.76	0.30	10.88	13.08	8.67	58.02	53.71	60.44	9.83	10.15	9.51
Agra	0.43	0.51	0.31	9.26	11.21	7.30	52.14	48.73	54.17	8.77	10.40	7.10
Firozabad	0.37	0.43	0.29	10.36	12.51	8.22	53.74	49.52	56.32	8.81	11.51	6.19
Etah	0.45	0.57	0.28	10.91	13.28	8.56	54.88	48.76	58.68	7.68	8.59	6.64
Mainpuri	0.44	0.57	0.25	11.23	13.83	8.71	55.50	51.27	58.40	9.26	10.11	8.30
Budaun	0.51	0.69	0.24	9.21	11.29	7.14	53.19	43.92	58.96	7.44	6.98	8.00
Bareilly	0.39	0.51	0.24	8.76	10.91	6.60	54.16	48.13	57.57	7.92	8.76	7.04
Pilibhit	0.43	0.53	0.29	9.26	11.41	7.11	54.73	47.79	58.93	7.15	8.71	5.38
Shahjahanpur	0.56	0.79	0.25	8.96	11.11	6.81	52.16	43.55	58.35	6.66	7.47	5.58
Kheri	0.41	0.50	0.29	9.99	12.09	7.89	54.11	47.80	58.43	8.43	8.64	8.15
Sitapur	0.43	0.55	0.28	10.62	12.81	8.44	55.49	47.83	60.79	7.40	7.89	6.56
Hardoi	0.46	0.62	0.22	10.09	12.33	7.87	54.51	44.92	61.01	8.06	8.30	7.52
Unnao	0.34	0.43	0.22	11.35	13.86	8.93	57.70	50.76	61.60	8.07	8.69	7.14
Lucknow	0.34	0.35	0.32	9.88	12.14	7.59	54.69	52.47	55.67	6.64	8.06	5.25
Rae Bareli	0.29	0.34	0.22	11.11	13.60	8.79	59.04	53.61	62.21	7.83	8.02	7.59
Farrukhabad	0.45	0.59	0.25	10.02	12.43	7.61	52.74	46.69	56.65	8.57	9.04	8.11
Kannauj	0.44	0.63	0.19	10.59	13.11	8.14	55.25	49.57	58.66	7.79	8.32	8.88
Etawah	0.51	0.71	0.23	12.09	14.85	9.39	57.76	53.58	60.44	8.26	6.74	9.72
Auraiya	0.50	0.72	0.19	11.78	14.48	9.16	56.61	52.18	59.58	7.98	9.82	6.00
Kanpur Dehat	0.65	0.93	0.26	12.70	15.34	10.09	57.53	53.42	60.34	8.78	10.85	6.69
Kanpur Nagar	0.52	0.60	0.40	10.37	12.59	8.08	53.32	50.93	54.64	6.65	9.02	4.85
Jalaun	0.56	0.76	0.28	12.20	14.69	9.72	59.26	54.22	62.85	9.20	10.98	7.46
Jhansi	0.38	0.45	0.28	10.05	11.90	8.17	57.62	50.67	60.99	7.29	8.19	6.26

State Name	Never married			Married			Widowed			Divorced/Separated		
	T	M	F	T	M	F	T	M	F	T	M	F
Lalitpur	0.38	0.53	0.18	9.01	11.02	6.99	56.11	46.79	61.42	6.95	8.18	4.49
Hamirpur	0.42	0.59	0.18	12.47	15.06	9.91	59.28	54.17	62.62	8.47	8.31	8.61
Mahoba	0.43	0.60	0.18	11.70	14.04	9.36	58.60	51.49	63.31	8.94	9.24	8.52
Banda	0.43	0.62	0.17	11.93	14.76	9.18	57.19	53.37	59.54	7.56	9.97	5.99
Chitrakoot	0.51	0.74	0.19	11.34	13.83	8.88	56.76	53.01	59.35	9.77	10.90	8.62
Fatehpur	0.42	0.55	0.25	11.83	14.58	9.14	55.92	52.61	57.99	9.38	10.89	8.40
Pratapgarh	0.29	0.34	0.23	12.60	16.03	9.71	62.36	60.75	63.39	10.90	12.70	9.00
Kaushambi	0.27	0.31	0.20	11.19	13.88	8.56	55.17	53.24	56.38	7.46	9.38	5.98
Allahabad	0.35	0.39	0.30	10.50	12.84	8.19	54.42	53.08	55.25	9.59	11.48	7.78
Barabanki	0.44	0.55	0.29	10.46	12.64	8.28	54.80	46.63	60.30	6.31	6.20	6.51
Faizabad	0.49	0.70	0.22	10.39	12.69	8.21	57.52	52.58	60.68	8.76	9.17	8.13
Ambedkar Nagar	0.42	0.56	0.26	11.85	14.63	9.35	62.44	59.33	64.67	10.37	11.42	8.70
Sultanpur	0.39	0.49	0.26	11.38	14.18	8.88	60.34	56.36	62.88	8.39	9.23	7.28
Bahraich	0.36	0.43	0.27	10.00	12.42	7.58	54.69	47.69	59.11	7.66	8.71	6.42
Shrawasti	0.43	0.53	0.28	10.34	12.70	8.00	56.08	49.01	61.66	7.62	8.82	5.85
Balrampur	0.36	0.46	0.24	10.65	13.29	8.10	57.51	49.97	64.37	8.40	9.38	7.09
Gonda	0.43	0.59	0.23	10.04	12.44	7.75	57.11	51.07	61.51	9.54	10.54	8.09
Siddharthnagar	0.42	0.52	0.28	11.00	13.91	8.33	59.83	53.90	65.06	11.17	12.34	9.52
Basti	0.52	0.72	0.26	11.57	14.47	8.90	60.25	56.30	63.52	10.66	11.54	8.69
Sant Kabir Nagar	0.39	0.54	0.22	12.03	15.40	9.10	62.40	58.14	65.54	9.90	11.14	8.08
Maharajganj	0.34	0.38	0.30	10.61	12.87	8.42	60.54	57.22	62.75	8.96	11.04	6.41
Gorakhpur	0.30	0.38	0.21	11.90	15.10	9.06	62.52	61.49	63.14	10.74	12.34	8.61
Kushinagar	0.27	0.32	0.20	11.26	14.24	8.55	63.02	59.96	64.79	12.88	15.17	10.42
Deoria	0.34	0.42	0.25	13.07	16.66	10.02	64.94	64.40	65.24	10.54	12.35	8.51
Azamgarh	0.40	0.50	0.29	12.83	16.63	9.70	63.99	63.48	64.29	11.55	14.01	8.46
Mau	0.33	0.40	0.24	12.72	16.07	9.76	64.13	64.93	63.66	10.53	13.88	8.14
Ballia	0.37	0.47	0.25	13.22	16.66	10.15	63.38	62.09	64.12	10.94	12.02	9.91
Jaunpur	0.36	0.45	0.25	12.68	16.47	9.62	62.07	61.52	62.34	10.68	12.55	8.65
Ghazipur	0.27	0.34	0.19	12.76	16.24	9.74	63.67	63.42	63.80	9.75	10.79	8.83
Chandauli	0.29	0.32	0.25	11.30	13.72	8.96	60.74	58.26	62.02	8.77	8.71	8.82
Varanasi	0.35	0.38	0.32	10.95	13.41	8.57	58.56	58.06	58.80	6.71	8.01	5.66
Sant Ravidas Nagar	0.29	0.33	0.24	11.00	13.46	8.75	61.04	59.51	61.95	8.86	11.81	5.32
Mirzapur	0.22	0.26	0.16	11.03	13.33	8.76	59.01	55.41	60.88	8.17	7.28	9.08
Sonbhadra	0.19	0.19	0.18	9.37	11.24	7.46	56.93	54.95	58.10	9.53	9.55	9.51

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.1.7

Sex Ratio of Aged by Sex and Residence in India & Uttar Pradesh, 2001

State Name	Total	Rural	Urban
India	1029	1026	1038
Uttar Pradesh	882	874	919
Saharanpur	841	816	926
Muzaffarnagar	829	808	902
Bijnor	873	853	949
Moradabad	862	842	916
Rampur	860	826	967
Jyotiba Phule Nagar	870	847	964
Meerut	892	867	925
Baghpat	780	765	866
Ghaziabad	900	897	903
Gautam Buddha Nagar	906	924	867
Bulandshahr	969	969	971
Aligarh	933	929	947
Hathras	943	927	1021
Mathura	891	875	933
Agra	860	856	867
Firozabad	883	869	923
Etah	893	873	1015
Mainpuri	847	836	926
Budaun	949	931	1048
Bareilly	916	902	947
Pilibhit	898	882	982
Shahjahanpur	857	837	953
Kheri	867	859	947
Sitapur	896	887	980
Hardoi	918	908	1006
Unnao	956	954	968
Lucknow	928	962	906
Rae Bareli	975	972	1022
Farrukhabad	853	828	965
Kannauj	896	879	1006
Etawah	857	836	945
Auraiya	847	839	906
Kanpur Dehat	816	813	863
Kanpur Nagar	827	826	828
Jalaun	844	824	933
Jhansi	975	933	1049
Lalitpur	923	895	1117

State Name	Total	Rural	Urban
Hamirpur	851	833	962
Mahoba	878	848	1010
Banda	834	819	931
Chitrakoot	806	796	909
Fatehpur	853	847	920
Pratapgarh	904	902	955
Kaushambi	829	824	895
Allahabad	818	814	834
Barabanki	921	916	985
Faizabad	916	924	857
Ambedkar Nagar	879	873	968
Sultanpur	926	925	958
Bahraich	859	846	1013
Shrawasti	826	823	981
Balrampur	811	802	940
Gonda	864	859	949
Siddharthnagar	811	808	936
Basti	815	812	898
Sant Kabir Nagar	854	851	908
Maharajganj	862	858	963
Gorakhpur	868	867	874
Kushinagar	879	877	940
Deoria	904	905	902
Azamgarh	890	890	885
Mau	865	860	891
Ballia	873	870	907
Jaunpur	946	943	1009
Ghazipur	897	896	918
Chandauli	901	896	958
Varanasi	882	889	869
Sant Ravidas Nagar	879	871	946
Mirzapur	908	897	987
Sonbhadra	843	832	961

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.1. 8
Percentage of Elderly Population (Scheduled Tribes) in Uttar Pradesh, 2001

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
India	6.08	5.71	6.47	6.21	5.85	6.59	4.61	4.17	5.08
Uttar Pradesh	5.45	5.61	5.28	5.68	5.91	5.43	3.67	3.42	3.96
Saharanpur	6.22	5.73	6.85	6.75	6.56	6.98	5.13	2.86	2.94
Muzaffarnagar	5.75	2.38	8.89	10.87	4.17	18.18	2.44	5.56	4.35
Bijnor	7.83	7.27	8.45	7.90	7.32	8.56	8.70	4.35	5.26
Moradabad	1.32	1.23	1.41	2.78	3.37	3.39	1.32	1.23	1.41
Rampur	1.68	1.27	2.48	2.96	2.33	3.61	0.53	0.66	2.63
Jyotiba Phule Nagar	4.17	5.88	4.17	4.35	5.88	3.33	5.71	4.00	4.55
Meerut	3.39	4.46	2.42	8.70	7.69	5.26	3.59	4.72	2.56
Baghpat	8.33	11.11	4.76	8.33	11.11	4.76	3.33	5.00	8.00
Ghaziabad	2.90	4.46	1.05	2.38	2.27	5.13	3.11	4.81	1.12
Gautam Buddha Nagar	6.78	6.54	7.07	7.72	7.55	7.91	4.00	3.64	4.44
Bulandshahr	10.64	8.74	12.94	17.31	19.23	15.38	8.09	5.19	11.86
Aligarh	6.09	6.35	5.77	5.62	4.17	7.32	6.38	7.69	4.76
Hathras	2.90	2.33	3.85	4.26	3.70	5.00	4.55	6.25	16.67
Mathura	3.03	4.39	1.71	3.70	4.62	2.86	2.08	4.08	4.26
Agra	4.16	5.29	2.91	3.96	5.18	2.62	4.40	5.42	3.28
Firozabad	3.11	2.88	3.37	4.00	3.33	4.35	3.28	3.19	3.37
Etah	6.67	6.25	7.14	8.00	7.14	9.09	5.88	5.56	5.71
Mainpuri	4.08	2.99	5.26	4.40	4.40	4.40	3.98	2.53	5.58
Budaun	1.89	5.66	3.77	1.20	4.88	2.38	4.35	3.13	4.35
Bareilly	1.33	1.46	1.18	2.08	2.94	2.17	1.22	1.17	1.28
Pilibhit	4.57	4.90	4.21	4.79	5.24	4.30	2.10	1.27	3.13
Shahjahanpur	2.06	2.08	4.08	5.26	5.56	5.00	3.39	3.33	3.45
Kheri	5.82	6.16	5.46	5.87	6.23	5.50	1.01	0.82	1.30
Sitapur	8.72	8.90	8.52	9.79	9.83	9.74	7.50	5.56	4.55
Hardoi	6.40	5.66	7.22	11.58	11.32	11.90	1.85	3.77	3.64
Unnao	4.81	4.99	4.59	4.58	4.96	4.13	5.58	5.08	6.19
Lucknow	4.53	4.13	5.00	7.51	6.88	8.25	3.98	3.59	4.41
Rae Bareli	6.05	6.26	5.83	6.37	6.57	6.16	1.64	1.69	1.59
Farrukhabad	5.49	5.01	6.02	6.25	6.67	5.88	5.40	4.84	6.04
Kannauj	2.13	4.35	8.33	8.70	4.55	4.35	2.27	4.76	8.70
Etawah	6.25	8.33	4.55	3.85	4.55	8.70	6.25	8.33	4.17
Auraiya	4.41	4.44	4.35	5.26	5.41	5.00	4.17	7.14	5.88
Kanpur Dehat	5.76	3.76	7.65	5.76	3.76	7.65	3.70	6.03	5.48
Kanpur Nagar	4.78	4.73	4.83	7.79	7.66	7.94	3.90	3.86	3.95
Jalaun	3.57	4.41	2.78	7.84	7.14	7.04	3.88	4.84	2.99
Jhansi	4.39	4.42	4.37	5.17	5.85	4.40	3.05	1.93	4.30
Lalitpur	4.00	4.35	6.38	10.71	4.76	9.26	4.55	7.69	3.85
Hamirpur	1.81	1.08	2.74	6.90	4.55	3.03	1.24	1.10	1.43

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
Mahoba	4.62	0.00	9.09	5.41	4.26	5.00	3.57	6.67	7.69
Banda	1.85	3.85	3.57	3.33	7.69	5.88	4.17	7.69	9.09
Chitrakoot	4.76	3.70	6.67	4.55	5.00	2.63	1.96	4.08	2.08
Fatehpur	7.28	6.61	8.00	7.18	6.06	8.43	7.69	9.09	6.38
Pratapgarh	4.40	3.90	4.88	4.46	3.95	4.94	4.62	6.67	3.64
Kaushambi	9.30	10.64	7.69	4.00	5.88	2.63	13.11	16.67	9.68
Allahabad	5.31	6.20	4.24	5.46	6.53	4.24	4.30	4.35	4.23
Barabanki	6.36	7.66	4.98	6.39	7.89	4.76	5.56	3.70	9.09
Faizabad	3.16	3.41	2.94	3.68	4.05	3.37	3.70	7.14	6.90
Ambedkar Nagar	1.40	1.22	1.64	1.40	1.22	1.64	1.43	3.66	2.90
Sultanpur	4.08	3.83	4.33	4.13	3.90	4.37	3.57	1.83	1.30
Bahraich	5.38	5.38	5.37	5.39	5.39	5.38	5.56	3.45	2.63
Shrawasti	5.45	5.04	5.87	5.45	5.05	5.88	4.48	4.72	5.77
Balrampur	5.63	5.79	5.45	5.64	5.82	5.45	1.45	2.27	4.00
Gonda	1.65	2.88	2.56	2.21	3.90	3.39	4.35	7.41	5.26
Siddharthnagar	9.65	10.40	8.74	10.09	11.02	9.00	5.00	3.70	9.09
Basti	5.11	4.92	5.31	5.11	4.92	5.31	3.57	4.03	2.38
Sant Kabir Nagar	3.58	3.11	4.11	3.58	3.11	4.11	2.82	3.27	4.79
Maharajganj	6.59	6.93	6.22	6.34	6.67	5.97	12.62	13.21	10.00
Gorakhpur	1.11	1.48	0.70	0.70	1.02	0.36	1.85	2.26	1.35
Kushinagar	2.15	2.51	1.82	2.18	2.55	1.84	7.26	5.13	4.20
Deoria	6.19	7.78	4.56	6.05	7.76	4.38	8.11	8.00	8.33
Azamgarh	3.71	4.74	2.64	3.83	4.93	2.70	2.25	1.87	1.40
Mau	3.73	3.47	3.96	3.53	2.80	4.14	4.27	5.08	3.45
Ballia	4.40	4.41	4.38	4.49	4.17	4.80	3.57	6.25	8.33
Jaunpur	2.13	2.50	1.70	2.14	2.53	1.71	1.60	2.22	1.40
Ghazipur	3.90	3.36	4.51	3.56	3.03	4.13	6.90	5.88	8.33
Chandauli	1.58	2.29	0.82	1.94	2.73	1.04	2.13	9.52	7.69
Varanasi	4.81	4.50	5.19	5.26	6.29	3.53	4.62	3.58	5.73
Sant Ravidas Nagar	4.00	4.07	3.92	4.17	4.17	4.17	5.26	4.35	7.69
Mirzapur	5.15	5.25	5.04	5.21	5.43	4.97	2.94	4.35	9.09
Sonbhadra	5.07	4.82	5.33	7.49	7.94	7.09	2.21	1.63	2.91

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.1.9
Percentage of Elderly Population (Scheduled Castes) in Uttar Pradesh 2001

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
India	6.87	6.53	7.23	7.22	6.92	7.54	5.47	5.00	5.98
Uttar Pradesh	6.71	6.63	6.79	6.94	6.90	6.98	5.09	4.79	5.44
Saharanpur	6.35	6.46	6.22	6.49	6.63	6.33	5.19	5.07	5.32
Muzaffarnagar	7.06	7.18	6.93	7.27	7.44	7.08	5.92	5.77	6.11
Bijnor	6.21	6.27	6.15	6.30	6.39	6.21	5.27	5.05	5.52
Moradabad	5.61	5.53	5.70	5.90	5.86	5.94	4.32	4.05	4.63
Rampur	4.96	4.83	5.10	5.08	4.99	5.18	3.85	3.41	4.35
Jyotiba Phule Nagar	6.12	6.14	6.09	6.34	6.36	6.31	4.74	4.76	4.72
Meerut	5.75	5.63	5.88	6.23	6.20	6.27	5.05	4.82	5.32
Baghpat	8.32	8.51	8.10	8.59	8.83	8.32	6.78	6.66	6.91
Ghaziabad	5.16	4.98	5.36	6.02	5.86	6.22	4.36	4.17	4.57
Gautam Buddha Nagar	5.90	5.58	6.27	6.56	6.22	6.95	3.89	3.68	4.15
Bulandshahr	7.10	6.56	7.71	7.38	6.85	7.99	5.35	4.78	6.00
Aligarh	6.66	6.20	7.18	7.14	6.66	7.69	4.97	4.57	5.43
Hathras	6.85	6.45	7.31	7.04	6.67	7.47	5.87	5.32	6.51
Mathura	6.26	5.94	6.63	6.50	6.21	6.85	5.25	4.83	5.73
Agra	5.03	4.76	5.35	5.69	5.42	6.00	4.20	3.93	4.53
Firozabad	6.00	5.81	6.22	6.42	6.21	6.67	4.84	4.73	4.98
Etah	6.53	6.28	6.83	6.74	6.53	6.99	5.28	4.76	5.87
Mainpuri	6.54	6.51	6.57	6.74	6.74	6.74	5.07	4.78	5.40
Budaun	6.20	5.78	6.71	6.37	5.98	6.85	4.95	4.29	5.71
Bareilly	5.50	5.34	5.68	5.88	5.74	6.04	3.94	3.67	4.24
Pilibhit	5.68	5.54	5.84	5.84	5.73	5.96	4.11	3.63	4.66
Shahjahanpur	6.09	5.93	6.28	6.29	6.13	6.47	4.34	4.08	4.64
Kheri	6.50	6.40	6.61	6.57	6.48	6.66	4.83	4.45	5.27
Sitapur	7.08	6.83	7.38	7.16	6.91	7.44	5.21	4.86	5.62
Hardoi	6.83	6.39	7.35	6.89	6.45	7.41	5.50	5.02	6.06
Unnao	7.12	6.71	7.57	7.25	6.84	7.70	5.46	5.05	5.92
Lucknow	6.41	6.05	6.80	7.25	6.85	7.69	4.57	4.32	4.86
Rae Bareli	7.07	6.84	7.31	7.17	6.96	7.39	5.05	4.54	5.61
Farrukhabad	5.71	5.66	5.76	5.86	5.84	5.87	5.02	4.83	5.23
Kannauj	6.27	6.04	6.55	6.42	6.20	6.69	4.99	4.68	5.34
Etawah	7.25	7.11	7.43	7.53	7.40	7.69	5.73	5.48	6.01
Auraiya	7.05	6.84	7.29	7.18	6.96	7.44	5.62	5.50	5.74
Kanpur Dehat	7.15	7.00	7.32	7.18	7.04	7.35	6.38	6.09	6.72
Kanpur Nagar	6.03	5.84	6.25	6.99	6.80	7.20	4.91	4.71	5.14
Jalaun	8.11	8.01	8.23	8.39	8.34	8.46	6.88	6.57	7.24
Jhansi	6.82	6.29	7.43	7.27	6.87	7.74	5.87	5.07	6.79
Lalitpur	6.03	5.73	6.35	6.11	5.87	6.38	5.09	4.20	6.09
Hamirpur	8.12	7.89	8.40	8.38	8.20	8.60	6.69	6.17	7.32

	Total			Rural			Urban		
State Name	T	M	F	T	M	F	T	M	F
Mahoba	8.08	7.89	8.29	8.25	8.15	8.37	7.22	6.62	7.91
Banda	7.60	7.59	7.61	7.82	7.84	7.79	6.07	5.79	6.39
Chitrakoot	6.46	6.55	6.35	6.55	6.67	6.41	5.27	4.99	5.58
Fatehpur	6.68	6.72	6.64	6.73	6.78	6.67	5.93	5.73	6.16
Pratapgarh	7.26	7.52	7.00	7.29	7.58	7.01	6.07	5.52	6.65
Kaushambi	5.81	6.04	5.56	5.82	6.05	5.56	5.64	5.78	5.49
Allahabad	5.83	5.95	5.69	5.95	6.15	5.73	5.09	4.80	5.44
Barabanki	7.50	7.18	7.86	7.55	7.23	7.91	5.84	5.44	6.30
Faizabad	7.14	7.05	7.23	7.22	7.16	7.29	5.78	5.36	6.23
Ambedkar Nagar	7.42	7.74	7.10	7.46	7.80	7.11	6.47	6.21	6.76
Sultanpur	7.59	7.70	7.49	7.64	7.76	7.52	5.53	5.11	5.99
Bahraich	6.96	6.92	7.00	7.03	7.00	7.06	4.86	4.41	5.39
Shrawasti	7.85	7.89	7.79	7.86	7.91	7.79	6.48	5.29	7.81
Balrampur	7.59	7.79	7.36	7.65	7.87	7.39	6.05	5.56	6.60
Gonda	7.10	7.02	7.20	7.18	7.11	7.27	4.53	4.15	4.99
Siddharthnagar	7.35	7.71	6.97	7.39	7.76	6.99	5.83	5.56	6.13
Basti	7.61	8.05	7.14	7.69	8.16	7.19	5.57	5.41	5.74
Sant Kabir Nagar	7.41	7.81	6.99	7.43	7.85	7.00	6.82	6.76	6.89
Maharajganj	7.06	7.08	7.05	7.11	7.13	7.08	5.96	5.67	6.28
Gorakhpur	7.06	7.39	6.73	7.23	7.62	6.85	5.68	5.64	5.74
Kushinagar	6.88	7.05	6.71	6.92	7.09	6.74	5.57	5.44	5.71
Deoria	7.39	7.58	7.19	7.47	7.68	7.26	6.14	6.13	6.16
Azamgarh	7.46	7.84	7.08	7.51	7.91	7.12	5.99	5.99	5.99
Mau	7.26	7.65	6.87	7.36	7.79	6.94	6.13	6.23	6.03
Ballia	7.09	7.34	6.82	7.14	7.43	6.84	6.24	6.02	6.48
Jaunpur	7.20	7.28	7.11	7.24	7.35	7.13	5.76	5.15	6.44
Ghazipur	7.16	7.30	7.03	7.21	7.36	7.06	5.95	5.80	6.12
Chandauli	6.87	6.83	6.93	6.97	6.96	6.98	5.65	5.18	6.16
Varanasi	6.30	6.18	6.44	6.55	6.50	6.60	5.49	5.16	5.87
Sant Ravidas Nagar	6.27	6.19	6.35	6.33	6.24	6.41	5.41	5.39	5.44
Mirzapur	6.50	6.46	6.55	6.54	6.52	6.57	5.98	5.68	6.31
Sonbhadra	6.34	6.60	6.07	6.56	6.86	6.24	2.87	2.58	3.21

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 3.2.4

Main and Marginal Workers by Educational Level of Elderly Population in Uttar Pradesh by Age and Sex, 2001

Educational level		Main workers 60-69			Main workers 70+		
		Total	Males	Females	Total	Males	Females
Total	Illiterate	59.69	55.97	88.58	61.69	59.30	86.56
	Literate	40.31	44.03	11.42	38.31	40.70	13.44
	Literate but below matric/secondary	26.23	28.82	6.11	26.71	28.60	7.07
	Matric/secondary but below graduate	8.17	9.05	1.30	5.77	6.19	1.43
	Technical diploma or certificate not equal to degree	0.07	0.08	0.03	0.05	0.05	0.02
	Graduate and above other than technical degree	2.12	2.30	0.73	1.72	1.82	0.71
	Technical degree or diploma equal to degree or post-graduate degree	0.28	0.29	0.14	0.21	0.21	0.13
Rural	Illiterate	62.88	59.10	91.20	64.73	62.35	89.29
	Literate	37.12	40.90	8.80	35.27	37.65	10.71
	Literate but below matric/secondary	25.86	28.62	5.13	26.02	27.97	5.86
	Matric/secondary but below graduate	6.65	7.46	0.58	4.47	4.83	0.74
	Technical diploma or certificate not equal to degree	0.05	0.05	0.01	0.03	0.03	0.01
	Graduate and above other than technical degree	1.02	1.14	0.10	0.83	0.89	0.18
	Technical degree or diploma equal to degree or post-graduate degree	0.11	0.13	0.02	0.08	0.09	0.08
Urban	Illiterate	39.20	36.38	67.02	40.29	37.86	66.56
	Literate	60.80	63.62	32.98	59.71	62.14	33.44
	Literate but below matric/secondary	28.57	30.03	14.18	31.54	32.98	15.92
	Matric/secondary but below graduate	17.91	18.99	7.23	14.94	15.73	6.51
	Technical diploma or certificate not equal to degree	0.23	0.24	0.22	0.16	0.17	0.14
	Graduate and above other than technical degree	9.24	9.57	5.93	8.00	8.31	4.63
	Technical degree or diploma equal to degree or post-graduate degree	1.32	1.34	1.11	1.09	1.10	1.00

Source: Census of India B- series, Economic Table

Appendix 3.2.6

Old Age Dependency Ratio of Elderly Population in Uttar Pradesh by Sex and Residence, 2001

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
Uttar Pradesh	14.42	14.59	14.23	15.45	15.80	15.07	10.98	10.67	11.35
Saharanpur	13.34	13.55	13.11	14.08	14.52	13.58	11.43	11.05	11.89
Muzaffarnagar	13.97	14.41	13.48	14.63	15.23	13.95	12.20	12.18	12.22
Bijnor	13.16	13.31	12.99	13.75	14.06	13.39	11.43	11.11	11.80
Moradabad	11.81	11.88	11.74	12.80	13.02	12.56	9.85	9.63	10.11
Rampur	11.57	11.63	11.50	11.94	12.19	11.66	10.60	10.15	11.10
Jyotiba Phule Nagar	12.73	12.83	12.62	13.61	13.89	13.30	10.24	9.83	10.69
Meerut	12.06	11.94	12.20	13.81	13.87	13.74	10.38	10.10	10.71
Baghpat	16.12	16.78	15.35	17.04	17.83	16.10	12.60	12.66	12.52
Ghaziabad	10.90	10.67	11.16	12.85	12.58	13.17	9.47	9.28	9.70
Gautam Buddha Nagar	12.53	12.04	13.12	14.41	13.85	15.06	9.80	9.47	10.22
Bulandshahr	15.58	14.88	16.38	15.96	15.22	16.81	14.39	13.80	15.05
Aligarh	13.97	13.37	14.69	15.43	14.73	16.25	10.78	10.33	11.30
Hathras	14.76	13.94	15.73	15.47	14.67	16.42	12.14	11.20	13.24
Mathura	14.16	13.64	14.78	14.73	14.29	15.27	12.89	12.21	13.71
Agra	12.35	12.25	12.46	14.13	14.00	14.28	10.33	10.26	10.42
Firozabad	12.87	12.61	13.18	13.99	13.71	14.33	10.48	10.21	10.79
Etah	14.14	13.72	14.64	14.75	14.40	15.18	11.44	10.65	12.34
Mainpuri	14.34	14.39	14.27	14.88	14.96	14.79	11.41	11.26	11.58
Budaun	12.99	12.17	13.98	13.52	12.70	14.52	10.79	9.89	11.80
Bareilly	11.37	11.01	11.80	12.34	11.95	12.80	9.67	9.31	10.07
Pilibhit	12.29	12.00	12.63	12.78	12.56	13.03	10.28	9.67	11.00
Shahjahanpur	12.35	12.10	12.66	12.95	12.74	13.22	10.23	9.77	10.77
Kheri	13.85	13.75	13.98	14.26	14.21	14.33	10.82	10.32	11.41
Sitapur	13.95	13.55	14.43	14.41	14.00	14.90	10.81	10.33	11.35
Hardoi	13.62	12.88	14.54	14.02	13.27	14.96	10.89	10.13	11.77
Unnao	14.67	14.11	15.29	15.39	14.82	16.04	11.01	10.55	11.53
Lucknow	11.59	11.24	12.00	14.49	13.71	15.40	10.22	10.06	10.41
Rae Bareli	14.89	14.83	14.96	15.54	15.57	15.52	9.45	8.88	10.07
Farrukhabad	13.27	13.13	13.45	14.03	13.99	14.08	10.84	10.29	11.47
Kannauj	13.43	13.07	13.84	14.05	13.74	14.43	10.49	9.87	11.19
Etawah	15.11	15.01	15.22	16.20	16.16	16.26	11.82	11.46	12.22
Auraiya	14.54	14.46	14.63	15.07	14.99	15.16	11.66	11.51	11.82
Kanpur Dehat	18.21	18.37	18.03	18.20	18.37	17.99	18.44	18.42	18.47
Kanpur Nagar	14.07	14.19	13.92	21.29	21.44	21.12	11.16	11.26	11.04
Jalaun	15.81	15.72	15.93	16.92	16.94	16.90	12.42	11.92	13.01
Jhansi	13.59	12.77	14.56	14.88	14.32	15.52	11.89	10.72	13.27
Lalitpur	13.07	12.75	13.43	13.45	13.31	13.62	11.07	9.84	12.47
Hamirpur	16.14	15.97	16.35	16.88	16.83	16.94	12.73	11.95	13.66

State Name	Total			Rural			Urban		
	T	M	F	T	M	F	T	M	F
Mahoba	15.78	15.60	15.99	16.37	16.46	16.27	13.77	12.68	15.05
Banda	15.34	15.46	15.20	15.99	16.28	15.66	12.24	11.60	13.01
Chitrakoot	15.12	15.64	14.52	15.50	16.14	14.76	12.08	11.68	12.56
Fatehpur	14.58	14.84	14.28	15.01	15.33	14.64	11.19	11.00	11.40
Pratapgarh	17.07	18.70	15.57	17.41	19.20	15.78	11.57	11.38	11.76
Kaushambi	13.79	14.30	13.22	13.90	14.47	13.27	12.46	12.32	12.62
Allahabad	14.49	14.94	13.97	15.99	16.89	15.01	10.86	10.56	11.24
Barabanki	14.71	14.29	15.21	15.02	14.62	15.50	11.87	11.25	12.56
Faizabad	14.72	15.00	14.42	15.20	15.64	14.76	12.01	11.73	12.35
Ambedkar Nagar	16.30	17.60	15.03	16.82	18.34	15.36	11.39	11.07	11.74
Sultanpur	16.88	17.82	15.97	17.19	18.25	16.18	11.32	10.91	11.79
Bahraich	13.48	13.43	13.54	13.85	13.89	13.81	10.43	9.66	11.32
Shrawasti	14.73	15.10	14.32	14.82	15.22	14.37	11.80	11.18	12.50
Balrampur	15.15	16.01	14.21	15.45	16.44	14.37	12.04	11.66	12.48
Gonda	14.51	14.95	14.02	14.90	15.46	14.31	9.81	9.25	10.47
Siddharthnagar	15.72	17.34	14.09	15.92	17.64	14.20	11.20	10.98	11.44
Basti	16.18	17.60	14.72	16.57	18.12	14.99	10.52	10.43	10.63
Sant Kabir Nagar	16.76	18.45	15.13	17.14	19.01	15.37	12.16	12.20	12.13
Maharajganj	16.03	16.79	15.24	16.30	17.14	15.42	11.55	11.15	11.98
Gorakhpur	15.08	16.16	14.00	16.30	17.81	14.85	10.85	10.88	10.83
Kushinagar	14.78	15.74	13.82	15.00	16.04	13.96	10.76	10.46	11.09
Deoria	16.93	18.45	15.51	17.39	19.13	15.79	13.18	13.32	13.04
Azamgarh	18.08	20.29	16.11	18.56	21.01	16.42	12.66	12.97	12.34
Mau	15.93	17.49	14.44	17.08	19.06	15.24	11.42	11.72	11.09
Ballia	17.07	18.19	15.95	17.43	18.71	16.15	14.04	13.99	14.10
Jaunpur	20.79	22.63	19.14	21.59	23.79	19.65	12.16	11.50	12.89
Ghazipur	16.85	18.11	15.63	17.18	18.60	15.83	13.23	13.12	13.34
Chandauli	15.00	15.24	14.73	15.53	15.91	15.13	10.89	10.33	11.54
Varanasi	13.89	14.04	13.73	15.66	16.13	15.16	11.62	11.48	11.78
Sant Ravidas Nagar	13.89	14.50	13.26	14.32	15.13	13.49	11.16	10.70	11.69
Mirzapur	14.15	14.07	14.25	14.62	14.68	14.55	11.52	10.71	12.47
Sonbhadra	11.93	12.20	11.62	13.90	14.53	13.20	4.97	4.52	5.54

Source: Census of India 2001, C- Series Social and Cultural Tables

Appendix 4.1
Sample size of NSSO 60th Round data

Regions	Sector		
	Rural	Urban	Total
Northern Upper Ganga Plains	662	524	1186
Central Region	469	244	713
Eastern Region	1134	236	1370
Southern Region	162	118	280
Southern Upper Ganga Plains	712	248	960
Total	3139	1370	4509