

**POPULATION AGEING IN WEST BENGAL WITH
SPECIAL REFERENCE TO SOCIAL SECURITY**

**A Thesis submitted to the University of North Bengal
For the Award of Degree of
Doctor of Philosophy in Economics**

By

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Under the Supervision of

Prof. K. K. Bagchi

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April 2018**

DECLARATION

As a Ph. D. Scholar of University of North Bengal at Department of Economics, I declare that the thesis entitled “**POPULATION AGEING IN WEST BENGAL WITH SPECIAL REFERENCE TO SOCIAL SECURITY**” has been originally carried out under the supervision of Prof. K. K. Bagchi (Professor & Head), Department of Economics, University of North Bengal, India in fulfillment of the requirements for the requirements for the degree of DOCTOR OF PHILOSOPHY in ECONOMICS. This work is the outcome of my own effort except the explicit references are made to the contributions of other researchers, and the work has not been submitted for any other degree in University of North Bengal and other institutions.

A handwritten signature in purple ink that reads "Archita Nayak" followed by a date "18/04/18". The signature is written in a cursive style.

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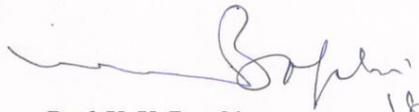
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CERTIFICATE

This is to certify that the thesis entitled “POPULATION AGEING IN WEST BENGAL WITH SPECIAL REFERENCE TO SOCIAL SECURITY” submitted to the University of North Bengal for the award of the degree of DOCTOR OF PHILOSOPHY in ECONOMICS is a bonafide record of the research work done by Smt. Archita Nayak under my supervision. It is also certified that this work has not previously formed the basis for the award to candidate of any degree, diploma, associateship, fellowship or any other similar title and the thesis is an independent and honest work of the candidate.


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ABSTRACT

Population ageing is an inevitable event, but its degree of urgency varies widely. Population ageing strains social insurance and pension systems and challenges existing models of social support. It affects economic growth, trade, migration, disease patterns and prevalence. The improved and up-to date information on population ageing and different aspects, their study and analysis are highly required for the policy makers in formation, evaluation, evaluation goals, development and implementation of programmes for the welfare and the proper utilization of the elderly, improving and generating public awareness and support for necessary policy up-gradation and implementation.

Demographic determinants of population ageing are as follows. Decreasing fertility along with lengthening life expectancy has reshaped the age structure of the population in most regions of the world by shifting relative weight from younger to elderly groups. International migration in reshaping age distribution has been far less important than that of fertility and mortality. Fertility decline is the primary determinant of population ageing. It is observed that (a) more people will survive to older ages and (b) increases in life expectancy are expected to be higher at older ages. The female advantage in life expectancy at birth increased globally over the last 50 years.

The magnitudes of population ageing and its associated information vary widely over the different categories of the attributes like religion, locality of residence, sex, caste etc. Among these attributes, the studying the problem on population ageing over religion is most important because the amount of variation of magnitudes of population ageing over the different categories of religion is highest among those of other attributes, next important attribute is community like Scheduled Castes and Scheduled Tribes in respect of studying the magnitude of population ageing. Per cent of elderly is the lowest in Muslim population among all the per cents of elderly over different categories of religion, locality of residence, sex, caste etc. Moreover, the socio-economic, educational and political statuses of Muslim population are very low compared with those at the national level. Natures and patterns of population ageing and the statuses of elderly among (a) Muslim and non-Muslim population, (b) Scheduled Tribes (ST) and non-Scheduled Tribes and (c) Scheduled Caste (SC) in India and West Bengal have been studied.

Although labour force participation rates are projected to decline from 2000 to 2040 in most countries, due to population ageing, labour-force-to-population ratios will

actually increase in most countries. The increase in labour-force-to-population ratios will further magnified by increases in age-specific rates of female labour force participation associated with fertility declines. Therefore economic growth will continue quickly. Policy responses related to retirement incentives, pension funding methods, investments in health care of the elderly and immigration can further make better the effect of population ageing on economic growth.

The economic aspect of an economy affected by population ageing has two sides (a) increase in the number of the elderly and decline in rate of population growth resulting reduced growth rate in both aggregate demand and investment meaning lower capital formation (macroeconomic phenomenon) and (b) the impact of ageing upon autonomous individuals in the form of economic behaviour over the lifecycle (microeconomic phenomenon). Life Cycle Hypothesis (LCH) provides how individuals' savings depend not only on their current income but also on their anticipated future situations in the old age when their earnings reduce sharply, people save earnings at their younger ages for their use in their old age transferring resources to their old age through savings. Dis-saving occurs in the old age of the elderly. As the number of elderly increases, reduction of aggregate savings is predicted due to dis-savings. The elderly do not only dis-save, but also spends less on consumption goods and services. This microeconomic behaviour of the elderly affects on national production, consumption and capital formation (macroeconomic effect of the ageing).

The present study is mainly to study the population ageing of West Bengal along with its associated aspects like sex ratios of elderly and general population; marital status, life expectancy, age-specific death rate, old-age dependency ratio etc compared to India.

The main objective of the study is to understand and forecast the magnitude and consequences of population ageing in India and West Bengal with special focus on two districts of West Bengal: (a) Malda (one of the Muslim dominated districts) and (b) Jalpaiguri (a district in top position with respect to per cent of Scheduled Tribes (ST)). The objective of the study also includes (a) the study of the magnitude of population ageing in India and West Bengal among Scheduled Castes (SC) population, (b) Indian Constitutional provisions, government programmes and policies for the welfare of elderly in India and West Bengal with special attention to the additional policies and programmes for welfare of elderly in West Bengal and (c) suggestions on ageing.

The research hypotheses tested in the present study are (1) there are significant differences of different social, economy, health conditions and others among the elderly of different genders and localities of residence, (2) per cent of the elderly is (a) highly positively related to total literacy rate, (b) highly negatively related to decadal population growth rate, (3) per cent of the elderly varies over locality of residences, genders, religions etc.

The study involves both primary and secondary sources of data. The sources of secondary data are (a) Indian Census data for the Census years 1961 to 2011, (b) National Sample Survey Organization (NSSO) 60th Round (January – June, 2004), (c) Profiles of Ageing 2017, Population Division, Department of Economic and Social Affairs, United Nations and (d) compiled data on the elderly persons and related areas from the published sources etc. The sources of primary data are selected households (having at least one elderly people in the household) from two districts: Malda and Jalpaiguri of West Bengal.

The present study is unique because of the following grounds:

- (a) Very few studies have been done on population ageing of Muslim population in West Bengal and India. Again to the best of our knowledge, no study on comparison of population ageing between Muslims and non-Muslims has been done.
- (b) Scheduled Tribes and Scheduled Castes are weaker/backward section of society in India. Very few studies have been done on population ageing of ST population in West Bengal and India. Again to the best of our knowledge, no study on comparison of population ageing between ST and non-ST populations has been done.
- (c) Moreover, very limited number of studies on SC population has been done. No study on population ageing among SC population has been done. Obviously, no study on comparison of population ageing between SC and non-SC populations has been done.
- (d) Very few studies have been done on Indian Constitutional provisions and government programmes and policies for the welfare of elderly in India and West Bengal.

Chapters 1 and 2 are “Introduction” and “Review of Literature” respectively.

In Chapter 3, “Population ageing in India and West Bengal” has been studied based on secondary data on India and West Bengal. Per cent of elderly varies widely from

state to state, religion to religion, community to community etc. The states like Kerala, Dadra and Nagar Haveli were with highest (12.55) and lowest (4.04) per cent of elderly respectively. Per cent of elderly of states/union territories having low population size were low. Percentages of children and teenagers in India and all states/union territories were highest in Muslim populations among those in all classifications by locality of residence, religion, caste, sex and are approximately 50 per cent and more; per cent of elderly and sex ratio for elderly were generally least among Muslims followed by ST. There were marked differences in life spans in populations of different religions and caste groups. In West Bengal, rate of reduction of persons aged 0–14 years was higher than that in India. Per cent of persons aged 15–59 years in West Bengal was higher than that in India implying that position of workforce in West Bengal was better than that in India. Rate of growth of elderly in West Bengal over 2001–2011 was higher than that in India. Percentages of elderly of India and West Bengal were 8.6 and 8.5 respectively. Sex ratios for elderly living in rural areas were in general higher than those for elderly living in urban areas. Generally sex ratios of elderly were higher than those of general population with some exceptions like in Darjeeling district.

Three districts of West Bengal, namely, Murshidabad, Malda and Dinajpur (N) were having top most Muslim-majority population. Strongly significant correlations between (a) per cent of elderly and per cent decadal growth rate of elderly in general population (negative) and (b) per cent of elderly and Human Development Index (positive) have been observed. Oldest-old group (aged 80+ years) grew faster than the other elderly age groups, particularly among females both in rural and urban areas of India and West Bengal and having higher sex ratio than other elderly age groups. In West Bengal, per cent of households not having any elderly members in rural areas was higher than that in urban area, but the reverse was in case of national level.

Life expectancy is one of major indicators for increasing population ageing. Life expectancy in India has increased in rural and urban areas. Kerala has got the highest life expectancy at birth followed by Maharashtra and Punjab. Life expectancies at birth and at the age 60 years were higher among females than males in India and West Bengal.

Some of the economic indicators for the elderly are old-age dependency ratio, headship of household, state of economic independence, economically dependence, economically independence by number of dependents, working status etc. The old-age dependency ratio has an increasing trend. The gap between female and male old-age

dependency ratio also has an increasing trend. There has been considerable gap in all the period of that ratio for rural and urban areas, because of a relatively higher concentration of working age population in urban areas. Since elderly females are expected to live more years than elderly males, per cent of elderly female heads is almost twice of that of elderly male heads.

The elderly males were much better off as majority of them did not depend on others for their livelihood. Per cent of elderly not dependent on others were generally (a) higher in rural areas than that in urban areas and (b) remarkably higher among elderly females than that of elderly males. About 70–85 per cent of dependent elderly were supported by their own children. In case of supporting by spouse, 16–19 per cent elderly females were supported by their male spouse, whereas 6–7 per cent of elderly males are supported by their female spouse.

Of the economically independent elderly men, more than 90 per cent reported to be living with one or more dependents, while among economically independent elderly women, about 65 per cent were having one or more dependents. Elderly females were having lesser number of dependents than elderly males in both rural and urban areas. 66.4 per cent of elderly males, 28.4 per cent of elderly females in rural area engaged in economic activity. In urban areas it was only 46.1 per cent of elderly males and 11.3 per cent of elderly females engaged in economic activity.

A remarkable proportion of elderly at the age 60 years, even at the age 80 years remained in working condition. The increase of elderly remained in working condition is one of the determinants for increasing population ageing in India and West Bengal. Literacy levels among elderly of (a) rural and urban areas, (b) males and females have improved tremendously over 2001 to 2011. Literacy rates for elderly in West Bengal were better than those in India. The increase of literacy among elderly is another determinant for increasing population ageing in India and West Bengal. Despite illness higher proportion of elderly men seemed to be feeling better health condition than elderly women. More elderly men and women in urban areas felt to have good/fair health as compared to elderly in rural areas. In both rural and urban areas, elderly men were more mobile than elderly women. About 90 per cent of elderly were still mobile; it is a good indicator for the well-being of the elderly. Prevalence of disabilities was higher in rural areas than that in urban areas. Per cent of currently married elderly women was lower than the per cent of currently married elderly men. Living arrangement of elderly is very

important indicator of social status and well-being. More than 56 per cent of elderly lived with their spouse and 32 per cent of elderly live with their children. About 5 per cent of elderly lived alone and 4 per cent live with other relations and non-relations. An overview of global population ageing has been provided in this chapter.

In Chapter 4, “Nature and pattern of population ageing among Muslims and non-Muslims population in India, West Bengal and Malda district” has been studied based on both secondary data on India, West Bengal and Malda district and primary data from Malda district. According to Census of India, 2011, literacy rate and work participation rate in general population of India were lowest among Muslim population. These are major determinants for the lowest per cent of elderly among Muslim population.

In India, West Bengal and Malda district, comparing Hindu and Muslim populations, (a) per cent of persons in the age group 0-14 years was higher among Muslims than Hindus indicating higher birth rates among Muslims than Hindus, (b) per cent of persons in the age group 15-59 years was lower among Muslims than Hindus indicating lesser work participation among Muslims than Hindus and (c) per cent of persons in the age group 60+ yearly (per cent of elderly) was lower among Muslims than Hindus. These variations between Hindus and Muslims are very prominent in Malda district. Per cent of elderly is higher among Hindus than Muslims in all elderly age groups, particularly in Malda district. This variation between Hindus and Muslims is very prominent in oldest-old age group (80+ years). In India, West Bengal and Malda district, per cent of elderly female was higher than that of male. In India, West Bengal and Malda district (a) sex ratios of elderly and general population of Hindu Community were higher than those of Muslim community and (b) in both Hindu and Muslim communities, (1) sex ratio of elderly was higher than that of general population, (2) sex ratio of general population was less than 1000, (3) sex ratio of elderly mostly is greater than 1000 indicating elderly females live longer than elderly males.

More than 70 per cent households in Malda district did not have any elderly member in the household. In both rural and urban areas, per cent of households without any elderly family member in Malda district was higher than those of India and West Bengal, that is because Malda district is Muslim dominated one and its per cent of elderly is lesser than those of India and West Bengal. Since elderly females are expected to live more years than elderly males, per cent of elderly female heads was almost twice of that of elderly male heads. Per cent of households having elderly head in Malda district was

less than those in India and West Bengal. Work participation among Muslim elderly females was very low compared that among Hindu elderly females in India, West Bengal and Malda district.

Per cent of currently married elderly males was more than twice that of currently married elderly females. Again per cent of currently married elderly males in Malda district was more than those in India and West Bengal, but per cent of currently married elderly females in Malda district was lesser than those in India. Disabilities due to vision and movement were more serious problems for the elderly in both rural and urban areas of Malda district. These disabilities were more acute in Malda district than West Bengal as a whole. Among elderly of Hindu community, literacy level among elderly in West Bengal was much higher than that in India as a whole. But literacy level of elderly belonging to Muslim community in West Bengal was lesser than that in India as a whole. There were significant gaps in the literacy level of elderly in Malda district between (a) rural and urban areas and (b) males and females.

Findings based on primary data from Malda district are as follows. Living arrangements of majority of elderly males were with spouses, sons, daughters and/or others which were very high compared to those for elderly females in all the locality of residences. Per cent of dependent elderly in the households were more in rural (more Muslim) area than that in rural (less Muslim) area. Per cent of working elderly in urban area was less than in both the rural areas.

Elderly of rural (more Muslim) area were more dependent; having less dependants; less being head of household; less involved in day-to-day purchases and other activities etc than those of elderly person of rural (less Muslim) area. Female elderly were mostly to get outside financial supports than male elderly in all localities of residence. Elderly persons in rural (more Muslim) area are in the worst conditions among others in respects of capable of spending money for buying, getting sufficient food and clothes and getting sufficient medicines and health care.

The determinants of social, economic and health conditions of people are age, sex, marital status, locality of residence, working status and possessing movable and immovable assets. Generally females (particularly elderly females) are less favourably treated than males in the society. Elderly females were more depressed than others.

Very least percent of elderly were confined to bed. Elderly females of urban areas were more associated with (a) different activities including cultural of their localities, (b) any religious organizations/associations than elderly males, but the reverse was in case of association with any political activities. Elderly females (particularly elderly females in rural (more Muslim)) area was less associated in political activities than elderly males. Elderly females (particularly elderly females in rural (more Muslim)) were less associated in cultural activities, religious organizations/associations than elderly males except elderly females in urban areas.

Attempts have been made to formulate some binary logistic regression equations of vital attributes for securities of elderly persons (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed of the elderly persons on the basis of the survey data on the elderly of the sampled households of Malda district. Factor analysis coupled with Reliability analysis has been done to assess life satisfaction of the elderly of Malda district with help of surveyed data.

In Chapter 5, “Nature and pattern of population ageing among scheduled tribes (ST) and non-scheduled tribes population in India, West Bengal and Jalpaiguri district” has been studied based on secondary data on India, West Bengal and Jalpaiguri district and primary data from Jalpaiguri district. Per cent literacy rate and per cent work participation of ST population of all ages in India were 49.5 and 45.4 respectively. Per cent of elderly persons of oldest-old age group among non-ST population of India and West Bengal and Jalpaiguri district were around 1.0, but those among ST population were around 0.5. In India and West Bengal (a) sex ratios of elderly persons and general population of ST population were higher than those of non-ST community and (b) in both ST and non-ST populations, (1) sex ratio of elderly persons was higher than that of general population, (2) sex ratio of general population was less than 1000 and (3) sex ratio of elderly persons mostly was greater than 1000. In case of Jalpaiguri district, most of sex ratios for elderly persons and general population were lesser than 1000 and sex ratio of elderly population of ST population were lesser than those for non-ST population. The number of females proportions of females in all ages and elderly age-groups among ST population were higher than those among non-ST population, with exceptions that reverse situation hold for elderly age groups among ST population in Jalpaiguri.

Occurrence of ageing in Jalpaiguri district was lesser than that in India and West Bengal, but higher than that in Malda district. Since elderly females were expected to live more years than elderly males, percentages of elderly female heads were almost twice of that of elderly male heads in both rural and urban areas of India, West Bengal, Jalpaiguri district respectively. In case of ST population, per cent of elderly working was least in Jalpaiguri district compared to India and West Bengal; but in case of non-ST population, per cent of elderly working was least in West Bengal compared to India and Jalpaiguri district. Percentages of elderly working among non-ST population were lesser than those among ST population, but the reverse were in case of Jalpaiguri district.

In case of ST population, per cent of currently married elderly was least in Jalpaiguri district; but in case of Non-ST population, per cent of currently married elderly was homogeneous in India, West Bengal and Jalpaiguri district. In both ST and Non-ST populations, per cent of currently married elderly male was almost twice that of currently married elderly females. Percentages of currently married elderly among non-ST population were higher than those among ST population in India, West Bengal and Jalpaiguri district. Percentages of currently married elderly among both ST and non-ST populations of Jalpaiguri were lesser than those in India, West Bengal and Malda district. Disabilities were highest in case of ST population of Jalpaiguri district among all other populations in India, West Bengal and Jalpaiguri district.

Among elderly of non-ST population in 2011, literacy level among elderly in West Bengal was much higher than that in India and Jalpaiguri district. But literacy level of elderly belonging to ST population in 2011 in India, West Bengal and Jalpaiguri district were almost equal, but there were remarkable variations of literacy level of elderly belonging to non-ST population in 2011 in India, West Bengal and Jalpaiguri district. In urban, rural (less ST) and rural (more ST) of Jalpaiguri district, per cent of living arrangement of elderly females without spouse, but with sons, daughters and others were higher than those of elderly males. Per cent of dependent elderly in the households were more in rural (more ST) area than that in urban and rural (less ST) areas. Therefore, economic condition of elderly in rural (more ST) was very low compared to elderly in urban and rural (less ST) areas.

Per cent of working elderly in urban area was less than in both the rural areas. Per cent of elderly females being dependent on others was more than elderly males in urban and rural (less ST) areas, but in this context, percentages of elderly females and males in

rural (more ST) were almost equal. Percentages of elderly females being head of household in all the localities of residence were lesser than those of elderly males. Per cent of elderly females being involved in day-to-day purchases was lesser than elderly males in urban and rural (less ST) areas, but in this context, percentages of elderly females and males in rural (more ST) were almost equal. Elderly of rural (more ST) areas were more dependent; having less dependants etc than those of elderly of rural (less ST) areas. In Jalpaiguri district, per cent of elderly in rural (more ST) area was very high compared to those in urban and rural (less ST) areas.

Per cent of elderly females to get outside financial supports was higher than that of elderly males in all localities of residence. About 80 per cent of elderly in Jalpaiguri district were mobile. Per cent of elderly associated with cultural, religious and political activities were least among elderly in rural (more ST) area of Jalpaiguri district. Like the study in Malda district, attempts have been made to formulate some binary logistic regression equations of vital attributes for securities of elderly persons (a) health status; (b) being head of household etc on the basis of the survey data on the elderly of the sampled households of Jalpaiguri district. Factor analysis coupled with Reliability analysis has been done to assess life satisfaction of the elderly persons of Jalpaiguri district with help of surveyed data.

In Chapter 6, "Population ageing in India and West Bengal among Scheduled Castes (SC) population" has been assessed based on secondary data relating to population. Sex ratios of elderly among SC population in West Bengal were generally higher than those in India meaning that more elderly females are living in West Bengal than India. Per cent of working elderly among SC population is lesser than that among ST population in India and West Bengal. Per cent of working elderly among SC population in West Bengal was very low compared to that in India. Per cent of working female elderly among SC population was 7.7 whereas that figure in Indian context was 28.5. Among elders belonging to SC population, about 60, 80 and 40 per cent person, male and females respectively are currently married in India and West Bengal and that figure was higher than elders among ST population in India and West Bengal.

Regarding disabilities of elderly among SC population both in India and West Bengal, vision and movement disabilities were major problems for them. Prevalence of disabilities of elderly among SC population was almost similar to elderly among ST population both in India and West Bengal. Literacy rate of elderly among SC population

in West Bengal was better than that in India. Literacy rate among elderly females of SC population was very low compared to that of elderly males which is common in all cases. There is a tremendous improvement of literacy rate among elderly of SC population in India and West Bengal. For India and West Bengal, literacy rate of elderly among SC population was better than that of elderly among ST population. Therefore, in both India and West Bengal, elderly among SC population were in a better position compared to ST population.

In Chapter 7, “Constitutional provisions, Government programmes and policies for the social security of elderly in India and West Bengal” has been studied. Three key human rights principles are fundamental to guaranteeing the right of social security: (a) comprehensiveness, (b) flexibility and (c) non-discrimination. The Ministry of Social Justice and Empowerment is the nodal Ministry for the welfare of elderly. The Ageing Division in the Social Defence Bureau of the Department of Social Justice and Empowerment develops and implements policies and programmes for the elderly in close collaboration with state governments, NGOs and civil society. Some of the national policies for elderly are (a) National Policy on Older Persons, (b) Old Age Social and Income Security, (c) National Old Age Pension Scheme, (d) National Family Benefit Scheme etc. Some of the privileges and benefits provided to the elderly are (a) bank loans for pensioners and family pensioners, (b) income tax rebate, (c) deduction in respect to medical insurance premium, medical treatment, (d) concessions on travelling by road, train, air etc and (e) Pension and Family Pension with Dearness Relief, Gratuity, Leave Encashment along with enhanced Pension etc. The chapter also discussed pension system in India including micro pensions and the Atal Pension Yojana, professional services to the elderly.

Some of the highlighted additional policies and programmes for welfare of elderly in West Bengal are (a) housing schemes for BPL category, (b) Project Pranam, a 24-hour helpline to provide safety, security and medical assistances to senior citizens living alone, (c) provision for pensions for the needy and elderly folk artistes through a project Lokprasar Prakash, (d) e-pension to provide e-governance to the pensioners of recognized non-Government aided educational institutions, Panchayat, Municipality etc. This chapter has highlighted the job opportunities for services related to elderly in homes, old age homes, hospitals etc. It has also mentioned different professional courses relating to the services of the elderly.

A large section of elderly suffering cruelty at the hands of friends or strangers does not get any reprieve. Elderly continue to suffer mental and physical abuse from their children or kin.

Following conclusions emerge from the study:

- (1) The rate of ageing in Hindu population is more than that in Muslim. The rate of ageing in Non-ST population is higher than that in ST. The rate of increase of ageing in case of Indian SC population is lesser than SC population of West Bengal.
- (2) Per cent of elderly varies widely among communities, religions, localities, sex etc. The link between ageing and development is wide ranging. Ageing is a 'triumph of civilization' and it is an important determinant of economic development. Information on how castes, religion and other factors affect the wellbeing of elderly in India is very limited. Population ageing is less advanced among SC and ST and Muslims than that the population as a whole.
- (3) Sex ratios of elderly are generally higher than those of all ages except in cases of ST of Jalpaiguri district and Muslims of Malda district. Sex ratios of elderly persons are generally low and lesser than 1000 in cases of Muslims and ST populations.
- (4) Percentages of households with at least one elderly member in the households in urban areas are higher than those in rural areas of West Bengal, Malda and Jalpaiguri districts.
- (5) Remarkable per cent of elderly, particularly elderly males are in working conditions. Percentages of working elderly males and females in rural areas are greater than those in urban areas. Percentages of working elderly males are remarkably greater than those of working elderly females. Per cent of working elderly persons belonging to Hindu community is higher than that belonging to Muslim community in India, but the reverse is in West Bengal. Percentages of working elderly belonging to ST communities are higher than that belonging to non-ST community in India and West Bengal, but the reverse is in Jalpaiguri. Per cent of working elderly in India is higher than that in West Bengal among SC community.
- (6) Regarding literacy level of the elderly persons in India and West Bengal, there are huge gaps in literacy rates between (a) rural and urban, (b) male and female, (c) Hindu and Muslim, (d) ST and Non-ST and (e) India and West Bengal.
- (7) Life expectancies at birth in West Bengal are higher than those in India for both males and females and these are 70 years in 2011-2015.

- (8) Age-specific death rate among elderly of West Bengal is less than that in India.
- (9) Old-age dependency ratio of West Bengal is less than that in India, except urban area. There is an increasing trend of old-age dependency ratio.

Following suggestions are made:

- (1) Capable and willing elderly must be provided the scopes to be engaged in work, to earn and contribute to their families through their productive activities by (a) extending retirement age, (b) providing contractual/ casual works etc. In case, employer and nation will be beneficial by utilizing experienced and knowledgeable manpower and enlarging manpower. Family members may provide supports to the elderly in this respect. Nation, society and elderly themselves must be motivated to increase active ageing, then the nation, society and elderly themselves would be beneficial economically, physically and mentally and also in increasing labour force.
- (2) Capable and willing elderly may be provided scopes to run self-entrepreneurships through micro-financing.
- (3) Elderly, who are not engaged through productive activities outside or inside home, may try to be engaged by other activities by associated with (a) local elderly members, (b) religious activities, (c) social organizations etc.
- (4) Family members may be encouraged to co-reside with their elderly members by proper adjustment peacefully. Co-residence of elderly in the household may reduce the chance of illness, morbidity, unhappiness of the elderly; as a whole it would increase the chance of well-being of the elderly.
- (5) Regular low cost or free health checkup for the elderly should be arranged by setting health services nearer to the elderly premises. Mobile dispensaries may be introduced. Medicines at subsidized rate may be provided to the poor elderly.
- (6) Artificial limbs may be provided to the needy elderly free of cost or at a low cost.
- (7) Government may take initiatives with corporate to provide medical and health care arrangements to the elderly under public private partnerships (PPPs).
- (8) There is an acute need for building old age homes in view of continued increased in their numbers. Apart from government initiatives, NGOs and corporate may extend helping hands by setting up old age homes under their public private partnerships and corporate social responsibility (CSR) initiatives.
- (9) There are several socio-economic gaps between Muslim and non-Muslim elderly. As change agents for reducing these gaps by improving socio-economic status of Muslim elderly, individuals and organizations need to come out with programmes and new initiatives that will cater to the development of Muslim community to mobilize and build awareness on their rights, welfare programmes and schemes. Same suggestions are applicable in case of ST and SC elderly.

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ACRONYMS

AAI	Active Ageing Index
ADB	Asian Development Bank
ADL	Activities of Daily Living
ANOVA	Analysis of Variance
APL	Above the Poverty Level
APY	Atal Pension Yojana
BAAIGM	Bangladesh Association for the Aged and Institute for Geriatric Medicine
BPL	Below the Poverty Level
CDR	Crude Death Rate
CEO	Chief Executive Officer
CSO	Central Statistical Organization
CSR	Corporate Social Responsibility
DESA	Department of Economic and Social Affairs
GDP	Gross Domestic Product
GOI	Government of India
HDI	Human Development Index
HRM	Human Resource Management
IBM	International Business Machine
IGNOAPS	Indira Gandhi National Old Age Pension Scheme
ILO	International Labour Organization
ING	International Netherlands Group
INR	Indian Rupees
IPOP	Integrated Programme for Older Person
IRA	Individual Retirement Account
KMO	Kaiser-Mayer-Olkin
LCH	Life Cycle Hypothesis
LDC	Less Developed Country
LFPR	Labour Force Participation Rate
LIC	Life Insurance Company
MDC	More Developed Country
MPI	Multidimensional Poverty Index
MS-Excel	Microsoft-Excel
NISD	National Institute of Social Defence
NPS	New Pension Scheme
NRI	Non-Resident Indian
NAC	National Advisory Council
NCOP	National Council of Older Pensions
NCSrC	National Council of Senior Citizens
NGO	Non-Government Organization
NHM	National Health Mission
NIA	National Institute of Aging
NICE	National Initiative on Care for Elderly
NPHCE	National Programme for the Health Care for the Elderly

NOAPS	National Old Age Pension Scheme
NSAP	National Social Assistance Programme
NSSO	National Sample Survey Organization
OAH	Old Age Home
OAP	Oldage Allowance Program
OASIS	Old Age Social and Income Security
OBC	Other Backward Class
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket
OPEC	Oil and Petroleum Exporting Country
OPHI	Oxford Poverty and Human Development Initiative
PaSR	Parent Support Ratio
PDS	Public Distribution System
PFRDA	Pension Funds Regulatory Authority of India
PECUC	People's Cultural Centre
PGDIGC	Post Graduate Diploma in Integrated Geriatric Centre
PMVVY	Pradhan Mantri Vaya Vandana Yojana
PPP	Public-Private Partnership
PSR	Potential Support Ratio
QOL	Quality of Life
RFID	Radio-Frequency Identification
RML	Reverse Mortgage Loan
RRTC	Regional Resources Training Centre
SBI	State Bank of India
SC	Scheduled Caste
SCSP	Scheduled Caste Sub-Plan
SCSS	Senior Citizen Saving Scheme
SCUP	Senior Citizens Unit Plan
SD	Standard Deviation
SPSS	Statistical Package for Social Science
SRS	Sample Registration System
SRSWOR	Simple Random Sampling Without Replacement
ST	Scheduled Tribe
S.U.	Sampling unit
TFR	Total Fertility Rate
TSP	Tribal Sub-Plan
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNIDOP	United Nations International Day of Older Persons
UNO	United Nations Organization
US	United States
USA	United States of America
UT	Union Territory
WBHIDCO	West Bengal Housing Infrastructure Development Corporation
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Population Ageing: An Inevitable Future Prospect

The share of the elderly population (persons aged 60 years and above) in the world has been increasing very fast. This fact is referred to as “Population Ageing” which is the effect of the “Demographic Transition” (the term Demographic Transition was introduced by the American demographer Frank W. Notestein) – both reduction in fertility and mortality rates. This is one of the most distinct demographic events in the modern world. There are four demographic transitions: (a) in stage one (Pre-transition), pre-industrial society, there are both death rate and birth rate are high; (b) in stage two (Early transition), that of developing country, the death rate reduces rapidly due to improvements of food supply and sanitation, which increase life spans and reduce disease; (c) in stage three (Late transition), birth rate falls due to access to contraception, increase in wages, urbanization, a reduction in subsistence agriculture, an increase in the status, empowerment and education of women etc; and (d) in stage four (Post transition), there are both low birth rate and low death rate and population growth is negligible or even declining. Demographic trap is used by demographers to explain the high fertility (birth rates) and declining mortality (death rates) in developing countries, resulting in a period of high population growth rate (PGR). High fertility rate combined with decreasing mortality rate happens when a developing country moves through the demographic transition of becoming developed. During “stage 2” of the demographic transition, quality of health care improves and death rates fall, but birth rates still remain high, resulting in a period of high population growth. Demographic gift is a term in demographics used to describe the initially favourable effect of falling fertility rates on the age-dependency ratio, the fraction of children and elderly persons as compared to that of the working population. Demographic-economic paradox is the inverse (negative) correlation found between wealth and fertility within and between nations (Preston, 1975).

Human Development Index (HDI) is a composite index consisting of three positively interrelated indices: (a) Life Expectancy Index, (b) Education Index and (c) Income Index. The Preston Curve indicates that individuals born in richer countries, on average, can expect to live longer than those born in poor countries (Preston, 1975). Preston’s hypothesis stands for the positive correlation between Income Index and Life

Expectancy Index. Samuel H. Preston described it in his article “The Changing Relation between Mortality and Level of Economic Development” in the journal *Population Studies* in 1975. Population ageing is related to HDI and Preston hypothesis. Another index related to population ageing is Multidimensional Poverty Index (MPI) having three dimensions health, education and living standard which are similar to three dimensions of HDI.

Population ageing is basically the result of a two-dimensional demographic transformation: on one hand, the decrease in overall mortality results in longer life-expectancy; and on the other hand, decrease in fertility results in decreasing the share of children and young adults in the population (Saha, 2006). Initially experienced in the more developed countries, this event is now rapidly happening in the developing countries like India. Various predictions indicate that population ageing is becoming a major global issue in the coming years. As the shares of elderly persons rise, that of other age groups in the population would fall. The projections indicate that the share of younger people in the age group of 15-24 years would fall in most countries. The intergenerational balance present today may not be present in the future. That changing balance between age groups would make the elderly persons more of a burden on society, and as resources would be shifted from the younger to the elderly persons, the whole world may realize intergenerational conflicts and tensions. There will be tremendous improvements in life expectancy and that improvement in life expectancy will take place at an increased rate for females than for males. There will be a progressive ageing of the elderly population and a majority of them would be females. Besides these demographic changes, the socio-economic characteristics of these people will be very interesting to study, both for academics and for policy makers (Dhar Chakraborti, 2004).

While an individual must grow elderly over time, aggregations of individuals can either become younger or elderly, depending upon fertility, mortality and migration history affecting their average age. The process of population ageing also implies a rise in the median age of the population, in addition to an increase in the fraction of population that is elderly persons. The process may be categorized into relative ageing and absolute ageing. Relative or bottom-up ageing means a growing share of elderly caused by fertility decline and dwindling youth base in the age composition. Here the number of elderly persons grows as a per cent of total population even if their numbers did not change at all.

Absolute or top-down ageing is the result of a real extension of lifespan raising the absolute number of elderly persons (Saha. 2006).

There is mounting evidence that the elderly persons are healthier than before. In an event referred to by demographers and health specialists as the “compression of morbidity,” the length of healthy old-age appears to be increasing. Part of this increase is due to increases in the life span, and part to even greater increases in the length of life free of chronic illness. The net effect is a decline in the lifetime burden of illness (Bloom et al 2008).

Many countries have drastically reduced their rates of infant and maternal mortality and the incidence of infectious and parasitic diseases. These improvements have interacted with reductions in fertility, advancements in education and health to produce populations with increasingly larger shares of elderly members (Kinsella, 1988). Changes in the age composition occur primarily when fertility declines and not when only mortality falls. Decreasing in mortality with unchanging fertility has little effect on the age structure of the population. The effect of initial decline in mortality has generally made the population young, because the fall mostly occurs among children resulting in improvement of their survival (Guha Ray, 1985). Besides fertility and mortality, migration also is an important factor of population growth. But in the demographic ageing process, migration has a secondary role since its effect is generally spread over all ages (Pollard et al. 1981). Population ageing is characterized not only by an increasing proportion of elderly people and their growing numbers, but also by ageing within the elderly population and ageing of the labour force (Dhar Chakraborty, 2004). Present demographic changes have already serious impact on every aspect of society in developed countries, demanding adjustments in economic and social policies and societal infrastructure. In developing countries, these changes are expected to occur at a much faster attempt than it took in developed countries and in most cases no infrastructure or policies will be available to deal with the consequent developments, unless proper initiatives are taken. Elderly population is likely to increase rapidly as successively larger cohorts enter the span of elderly ages. It needs to be stressed that the additions in the cohorts of the aged over the next few decades would mostly comprise of baby boomers of yesteryears who suffered poor life course of experiences. Their reliance on transfer income, particularly on subsidies and transfer of public money, is therefore expected to be higher (Alam, 2004).

The International Day of Older Persons is observed on October 1 each year. On December 14, 1990 the United Nations (UN) General Assembly voted to establish October 1 as the International Day of Older Persons as recorded in Resolution 45/106. The holiday was observed for the first time on October 1, 1991. The holiday is celebrated by raising awareness about issues affecting the elderly persons, such as senescence and elder abuse. It is also a day to appreciate the contributions that elderly people make to the society. The Vienna International Plan of Action on Aging was adopted by the World Assembly on Aging held in Vienna, Austria from 26 July to 6 August 1982.

1.2 Social Security and Elderly related Social Security

Social security is enshrined in Article 22 of the Universal Declaration of Human Rights, which states: “Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.” According to the International Labour Organization (ILO), “Social security is the security that society furnishes through appropriate organisation against certain risks to which its members are exposed. These risks are essentially contingencies of life which the individual of small means cannot effectively provide by his own ability, or foresight alone or even in private combination with his fellows”. Social Security protects individuals and their families from loss of earnings due to retirement, disability, accident or death (Waid, 2012). Significance of social security varies from county to country, society to society, individual to individual etc. Social security measures are generally grouped under two broad categories, namely, social assistance and social insurance measures. The difference between the two measures depends upon the condition whether the recipients have contributed to such benefits through their personal savings or not.

Social assistance consists of any help that society (particularly the Government) provides to the needy persons without requiring them to share the burden of maintaining such programmes. The extent and form of assistance are determined mainly by the circumstances of the needy. Social assistance can be seen as a device to ensure a minimum level of living of the members of the society. One example of social assistance is National Old Age Pension Scheme (NOAPS).

Social insurance is the joint venture on the part of the individual beneficiary, the employers, with or without the Government to provide for economic security and other benefits in specific situations, such as un-employment, sickness, accidents, death, elderly age, retirement, and other contingencies in accordance with the prevailing procedures and practices. Social insurance, like social assistance, aims at maintaining a certain level of life through savings contributions or investment for the future by the beneficiary. One example of social insurance is pension.

Risks relating to elderly are economic, health (physical and mental), shelter, living arrangement, protection, compassion, association, involvement, social adjustment etc. Different securities furnished to the elderly persons by family members, relatives, society, nation etc to overcome or decrease their risks.

1.3 Historical Development of the Study Area

Population ageing is explained by demographic transition. The demographic transition is explained in four stages. In stage one, which prevails in pre-industrial societies (i.e. the world before the 17th century), both birth and death rates are high. In the ancient society, security of the family members and clan was very important for which the younger generations were responsible for assistance and support for the elderly. The elderly persons were highly respected by the younger generations. Combined efforts of the experience and wisdom of the elders and the physical strength of the young guided and continued the family and clan to survive and develop. The family members looked after and provided cares to the elderly persons, it was considered as the moral and social responsibility of the family members, an expression of gratitude of the younger generations towards the elderly persons. The elderly persons in their adult ages provided different services in bearing, educating, protecting etc and through their hard-work and thrift, generated assets, property etc and leading to employment and income-generation for the younger generations. Few people reached old age in primitive societies. But the situations have been changed because of various developments in the societies particularly due to developments in medical sciences, mortality has been reduced and expectation of life increased tremendously, number of elders has been increased. With the development of society, the children, youth and women became the members and targets of development. Now, the elderly persons are neglected in some cases and are the recipients of only welfare services. But, because of their large numbers and social changes, they have attracted the attention of the state (Paul Chowdhury1992).

1.4 Demographic Determinants of Population Ageing

Demographic determinants of population ageing are as follows. Decreasing fertility along with increasing life expectancy has reshaped the age structure of the population in most regions of the world by shifting relative weight from younger to elderly groups. International migration in reshaping age distribution has been far less important than that of fertility and mortality. Fertility decline is the primary determinant of population ageing. Over the last half century, the total fertility rate (TFR) decreased globally by almost half, from 5.0 to 2.7 children per female. Over the next half century, it is expected to drop to the replacement level of 2.1 children per female. Fertility is much below the replacement level in the more developed regions of the world. At present, the TFR is below the replacement level in practically all industrialized countries. Fertility decline in the less developed regions started later and has proceeded faster. As fertility rates move towards lower levels, mortality decline, especially at elderly ages, assumes an increasingly important role in reshaping age structure of population. People are living longer and longer, but large variations exist. Great variations in life expectancy exist within the less developed regions of the world. It is observed that (a) more people will survive to elderly ages and (b) increases in life expectancy are expected to be higher at elderly ages. Except for a small number of countries, where cultural factors have contributed to lower female life expectancy, reductions in mortality have been substantially higher among females than males. The female advantage in life expectancy at birth increased globally over the last 50 years (World Population Ageing 1950-2050 presented by the Population Division, Department of Economic and Social Affairs (DESA), United Nations, 2002).

1.5 Population Ageing, Economic Growth, Sustainable Development and Social Protection

Although labour force participation rates are projected to decline from 2000 to 2040 in most countries, due to population ageing, labour-force-to-population ratios will actually increase in most countries. Reason behind it is that low fertility will cause lower youth dependency that is more than enough to offset the skewing of adults toward the elderly ages at which labour force participation is lower. The increase in labour-force-to-population ratios will further magnified by increases in age-specific rates of female labour force participation associated with fertility declines. Therefore economic growth

will continue quickly. For the OECD countries, the declines projected to occur in both labour force participation and labour-force-to-population ratios suggest modest declines in the pace of economic growth. But even these effects can be reduced by behavioural responses to population ageing - in the form of higher savings for retirement, greater labour force participation and increased immigration from labour-surplus to labour-deficit countries. Population ageing in developed countries may have less effect than some have predicted. Policy responses related to retirement incentives, pension funding methods, investments in health care of the elderly and immigration can further make better the effect of population ageing on economic growth (Bloom et al, 2008). Elderly persons, in general, are not producers, but consumers of special consuming behaviours.

World population ageing is a consequence, of substantial progress in improving the health and well-being and reducing mortality risks faced by people around the world. People are living longer, and in many cases, healthier lives than ever before. The benefits of greater longevity to individuals, families and society are many. Longer lives can afford individuals opportunities to increase their working life, embark on second careers, or pursue varied interests in elderly ages. Families benefit from the contributions of elderly generations, through financial support, assistance with household maintenance, participation of childcare and decision-making activities etc. Societies benefit from the wisdom and experience of the elderly persons and from their contributions to the labour force, as well as, from their volunteerism, philanthropy and civil engagement. At the same time, many countries are concerned about population ageing, with respect to its implications for the systems and institutions that aim to protect and preserve people's well-being. In many countries, the number of elderly persons has been growing faster than the number of people in the traditional working ages, providing rise to concerns about the fiscal sustainability of pension systems that rely upon contributions from current working people (generally younger generation) to pay benefits to elderly persons. Population ageing and growth in the number of persons at very advanced ages put pressure on health care systems. Population ageing drives increases in health expenditures. Poverty rates among elderly relative to the general population vary, largely due to the coverage and adequacy of old-age social protection systems.

Elderly persons vary greatly in regard to their independence and economic self-sufficiency. Many of them live independently and support themselves with their own income, also helping others, including some of them remain active in their labour forces.

But for large of the population, old age is associated with increasing dependency and vulnerability associated with declining income or health and a growing need for care and support. Vulnerability of elderly persons is greater where there is no reliable source of income support, such as through social protection mechanism, which includes pensions, disability insurance or health care benefits for the elderly. Retirement pensions or similar scheme involving income support at elderly age are critical to elderly persons' social protection. The right to income security in elderly age is grounded in the Universal Declaration of Human Rights (1948) and in the International Covenant on Economic, Social and Cultural Rights (1966). In recent years, many low-income and middle-income countries have expanded the coverage of contributory pension schemes and established non-contributory pensions. Many high-income countries have adopted fiscal consideration, reforming their pension systems by rising the statutory pensionable age, reducing benefits or increasing contribution rates to ensure the system's long-term sustainability (World Population Ageing 2015, Population Division, Department of Economic and Social Affairs, United Nations).

1.6 Statement of the Problem

Population ageing is an inevitable event, but its degree of urgency varies widely in different societies. The consequences of rapid transformation in age-structure and the social and economic changes require deep investigations and study (Saha, 2006). With the increasing complexities of modern society, the elderly started feeling themselves unsecured and burden in their own family and to the society (whereas those elderly were essential members of the families and societies in their early lives). They cannot adjust with the other members of the family. The younger members of the family remain busy to such an extent that they intentionally or unintentionally cannot manage their time for the service of their elderly family members. The elderly family members usually blame that they are not provided proper care, rather are ill-treated at home by their family members and get offended, insulted and upset. The younger members, also on the other hand, charge and blame the elderly family members against their non cooperation, misunderstandings and quarrelsome behaviour. The results are that the elderly started living in separate living arrangements or taking shelter in Old Age Homes (OAH). In some cases, the elderly bear miserable lives even commit suicide. In many developing countries, rapid social and demographic changes are taking place with the occurrence of population ageing. Population control strategies directed at reducing fertility levels and

family size has been becoming smaller and smaller, which are not always socially harmonious or economically favourable. The changes in family size and composition of households have important implications for the well-being of the elderly and other members in the family particularly for the children. Population ageing strains social insurance and pension systems and challenges existing models of social support. It affects economic growth, trade, migration, disease patterns and prevalence and fundamental assumptions about growing elderly. Using data from the United Nations, U.S. Census Bureau, and Statistical Office of the European Communities as well as regional surveys and scientific journals, the U.S. National Institute on Aging (NIA), with input from demographers, economists and experts on aging, identified nine emerging trends in global aging. These trends present a snapshot of challenges and opportunities that clearly show why population matters (National Institute on Aging (US, 2006)).

The link between ageing and development is wide ranging. Ageing is a 'triumph of civilization' and it is an important determinant of economic development. Ageing starts with age-related changes in production, consumption and distribution. Productivity falls with the rise in the age of the workers. There is a tremendous shift towards unproductive consumption in the form of health care and a massive reallocation of resources from the younger to the elderly in the form of old age security benefits. Elderly people are usually regarded as economically unproductive. People of some countries like Australia tend towards early retirement due to social pressures and lifestyle attitudes. There will be fewer taxpayers who will remain to support pensions. There will also have been inadequate savings in their super funds (early retirement means less working periods), placing enormous pressure on government welfare. Labour-force participation varies widely among specific sub-regions and countries. People of some countries like Japan and India have to work even after their retirement ages. In some countries, a large cohort of workers move into extended retirement years with a smaller cohort of children entering into the working-age group. Elderly women in Asia are much less likely to work than elderly men. Again, in general, the number of elderly women is larger than that of elderly men. Then there would be shortage of workforce. Population ageing has tremendous implications for consumers, businesses and governments. Elderly consumers live with different lifestyles. They have more time, money compared to any other stages of their life and have a less direct role with children. They spend less on renovation, furniture and other family items. This consequently affects the wider public in the range

of goods and services offered by producers and businesses. As individuals live longer, the amount of time in retirement period is likely to be longer periods, which requires a sustainable income base drawn in part from previous savings or supplemented by part-time/full-time work (working mostly in informal sector) to meet a changing expectation of quality of life and standard of living in retirement.

The elderly persons are traditionally dependent on a substantial input of unpaid, informal care, largely provided by family members. But these traditions have been changing rapidly; some elderly people are residing separately from family members, or living in old-age homes. Mature elderly workers play a vital role to play in future of a nation's economy. Competence is what counts, yet many organizations judge employees according to age (as experiences and wages are highly positively related to age in many cases). Unless organizations adjust their thinking on mature workers, market forces may do it for them. The supply of mature workers will grow rapidly in the years ahead, while the supply of younger workers will be relatively on contract. If organizations drop mandatory retirement policies – officially or by default – then the nation gains as a whole. Social values and attitudes influence the respective roles of government, private business (service provider), and individuals in providing resources and services to the elderly persons. The circumstances of elderly generations (e.g. labour force participation, level of private income and assets, health status, and availability of family/community support) will influence the level of resources that will be needed for the elderly care, health, housing and income support. Much of recent government policy has focused on cost reduction and shifting costs and responsibility from the public sector to individuals, families, community groups and private business.

Information on how caste, religion, sex and other factors affect the wellbeing of elderly in India is very limited. Population ageing is less advanced among Scheduled Castes and Scheduled Tribes and Muslims than that of the population as a whole. The improved and up-to date information on population ageing and its different aspects and their study and analysis are highly required for the policy makers in formulation, evaluating goals, development and implementation of programmes for the welfare and the proper optimal utilization of the elderly population, improving and generating public awareness and support for necessary policy up-gradation and implementation. Majority of the elderly people suffer a lot of insecurities relating to their health (physical and mental), livelihood, shelter, love, care, understanding, compassion etc. and like to be an essential

member of their households and societies sharing their happiness and sorrow, to act as decision-makers as they used to do so at their adult lives with same dignities. But the elderly persons of today are more wellbeing compared to those of yesteryears. Some of the elderly persons are living more years (even some octogenarians, nonagenarians, centenarians etc. are found in rural and urban areas) with sound health and mind, with well economic condition, with high social status, even remaining in workforce etc. The socio-economic and health conditions of the elderly people vary according to various factors like age, sex, locality of residence, living arrangement, life style, life skill, religion, caste, literacy, marital status, work participation, activity status of non-working elderly persons etc.

Most of the elderly people at the rural areas and/or working in the informal sector particularly self-entrepreneurship do not have any specific retirement; they can work, generate income, save money for future, contribute money and services to the family and society etc as long as they can. Since the income of the elderly people is likely to be ceased or decreased as their ages increase and/or health conditions deteriorate and in most cases, resources gathered in their adult ages, are likely to be reduced and even exhausted as their ages increase. Their needs in general reduce gradually as age increases (expenditures for healthcare increase as age increase up to certain age, but decrease afterwards). Providing socio-economic needs to the elderly people is the primary importance of the society and nation. Family (particularly in India) is the major care-giver (supporting element) to the most of the elderly people. But in the fast changing society, people are trying to fulfill their own ambitions and that of their children and the conventional family care-giving system is being changing slowly (now-a-days sometimes, elderly people have to stay separately, particularly in old age homes, to acquire their livelihood by their own means). Very few of the elderly people may acquire their livelihood through pension, some may have adequate savings to meet their livelihood, but the rest have to depend on the public help including family members. The economic aspect of population ageing has to deal with the following issues: (1) the money necessary for taking care of the elderly persons, (2) the money available and their sources for taking care of the elderly persons, (3) how the economic status of the elderly persons affect the different aspects of their life (e.g. firstly health, well-being, involvement in decision-taking, input to household related activities etc) in the society (Devi et al, 2008).

1.7 Significance or Scope of the Study

In India, the elderly population (aged 60 years and above) account for 8.6 per cent of total population in 2011 (For males it was marginally lower at 8.2 per cent, while for females it was 9.0 per cent. For rural area it was 8.8 per cent, while in urban area it was 8.1 per cent). Per cent of elderly persons among Hindu and Muslim communities in India were 8.2 and 6.4 respectively. Per cent of elderly persons among Muslims were least among all the religious communities. Per cent of elderly persons among Scheduled Tribes (ST) and Scheduled Castes (SC) populations were 6.9 and 7.8 respectively. Among states, the per cent of elderly persons vary from around 4 to 5 per cent in small states like Dadra & Nagar Haveli, Arunachal Pradesh, Daman & Diu and Meghalaya to more 12.6 per cent in Kerala. The old-age dependency ratio climbed from 10.9 per cent in 1961 to 14.2 per cent in 2011 for India as a whole. For females and males, the values of the ratio were 14.9 per cent and 13.6 per cent respectively in 2011. About 65 per cent of the elderly persons had to depend on others for their day-to-day maintenance. Less than 20 per cent of elderly women but majorities of elderly men were economically independent. In rural areas, 55 per cent of the elderly persons with sickness and 77 per cent of those without sickness felt that they were in a good or fair condition of health. In urban areas, the respective proportions were 63 per cent and 78 per cent. Literacy rate among elderly persons in India as a whole, in rural and urban areas of India according to Census of India were 43.5, 34.2 and 66.0 respectively. Per cent of households in India having at least one elderly family members was 31.3. Life expectancies of elderly persons in India at birth and at age 60 years were 68.3 and 18.0 respectively. Percentages of currently married elderly males and females in India were 82.1 and 49.6 respectively.

In West Bengal, the proportion of the elderly population (aged 60 years and above) was 8.5 per cent in 2011 (For males it was 8.2 per cent, while for female it was 8.8 per cent. For rural area it was 7.9 per cent, while in urban area it was 9.8 per cent). Per cent of elderly persons among Hindu and Muslim communities in West Bengal were 9.4 and 6.1 respectively. Per cent of elderly persons among Muslims were least among all the religious communities. Per cent of elderly persons among ST and SC populations were 7.0 and 7.6 respectively. Within West Bengal, district wise comparisons show that Kolkata had highest per cent of elderly population (11.8 per cent), while Uttar Dinajpur had lowest per cent (6.3 per cent). Significantly high proportion (40 per cent) of the

elderly persons aged 60+ was economically active. Literacy rate among elderly persons in West Bengal as a whole, in rural and urban areas of West Bengal according to Census of India were 53.5, 42.2 and 72.9 respectively. Per cent of households in West Bengal having at least one elderly family members was 30.4. Life expectancies of elderly persons in West Bengal at birth and at age 60 years were 70.5 and 17.9 respectively. Percentages of currently married elderly males and females in West Bengal were 85.7 and 39.9 respectively.

Very few studies on population ageing in West Bengal have been done so far. Ali et al. (2001) conducted a study on displaced (due to land acquisition) elderly persons in the rural areas: Kolaghat and Kharagpur. Chakraborty (2005) conducted a sample survey in a rural block of North 24 Parganas to study health seeking behavior of elderly population. Roy (2010) conducted a study on status of elderly persons in the tribal society (Lepcha) of Darjeeling district. Above all, to the best of our knowledge, (a) no significant study have not done yet on (i) nature and pattern of population ageing among Muslim and Non-Muslim population in India, West Bengal and particularly in Malda district, (ii) nature and pattern of population ageing among Scheduled Tribes (ST) and non-Scheduled Tribes population in India, West Bengal and particularly in Jalpaiguri district, and (b) again no study on population ageing in India and West Bengal among Schedules Castes (SC) population has not yet done. Study of the magnitude of population ageing based on religions and social communities like Scheduled Tribes and Scheduled Castes are very important and relevant in Indian national context.

Income from work, savings and insurances are the most important sources of economic support for the elderly persons. There is a gradual decline of work force participation and involvement of household and social activities of the elderly persons. The problems of the elderly persons are turning very acute day by day. Studies dealing with the social and economic security for the elderly persons particularly the elderly persons of West Bengal directly or indirectly are comparatively negligible.

1.8 Objectives of the Study

The general objective of the study is to understand and forecast the magnitude and consequences of population ageing in India and West Bengal with special focus on two districts of West Bengal: (a) Malda (one of the Muslim dominated districts in West Bengal) and (b) Jalpaiguri (a district in top position with respect to per cent of Scheduled

Tribes (ST) in West Bengal). The objective of the study also includes (a) the study of the magnitude of population ageing in India and West Bengal among Scheduled Castes (SC) population, (b) Indian Constitutional provisions and legal protection, government programmes and policies for the welfare of elderly persons in India and West Bengal with special attention to the additional policies and programmes for welfare of elderly persons in West Bengal and (c) suggestions on population ageing. The study will focus on the following objectives:

1. To study the magnitude and trend of population ageing including sex ratio, marital status, life expectancy etc of the elderly persons etc in India and West Bengal.
2. To study about the economic status of the elderly persons.
3. To study about the health and social status of the elderly persons.
4. To study the policies and programmes for social security of the elderly persons undertaken in India and West Bengal.
5. To study about the provisions and implementations and suggestions of social and economic security and health care for the elderly persons in West Bengal.

1.9 (a) Research Questions

We have tried to find out answers to the following principal and other research questions:

Principal Research Questions:

1. What is the share of elderly persons in total population?
2. What are the sex ratio of elderly persons and persons of all ages?
3. What are the distributions of (a) living arrangements, (b) marital status,(c) working status of elderly persons?
4. What are the life expectancies (a) at birth and (b) at age 60 years of population?
5. What are age-specific death rates of elderly persons?
6. What is old-age dependency ratio?
7. What is the distribution of elderly persons by state of economic independence?
8. What is the distribution of economically dependent elderly persons by category of persons supporting them?
9. What is the literacy rate of elderly persons?

10. What is the distribution of elderly persons by state of physical mobility?

Other Research Questions:

1. How does the population ageing and related issues affected by different attributes like religion, locality of residence, sex, caste, states/union territories of India, districts of West Bengal etc?
2. How do the elderly persons be financially supported by kin (not household members)?
3. How do the elderly females be covered under National Old Age Pension Scheme?
4. What are the distributions of elderly persons with their general feeling about their health, loneliness etc?
5. What are the Constitutional provisions and legal measures for the protection of the elderly persons in India?
6. What are the programmes and policies for welfare of elderly persons in India?
7. What are the programmes and policies for welfare of elderly persons adopted at state level in West Bengal?
8. What are scopes for job opportunities for younger generations for providing car services to the elderly persons?

(b) Research Hypotheses

1. There are significant differences of different social, economic, health and other conditions among the elderly persons of different genders and localities of residence.
2. Per cent of the elderly persons in the total population is (a) highly positively related to total literacy rate, (b) highly negatively related to decadal population growth rate.
3. Per cent of the elderly persons in the total population vary over locality of residences, genders, religions, communities and economic conditions.
4. There is significance association between earning of household income and earning of elderly persons of the household.
5. In Malda and Jalpaiguri districts, localities of residence and gender are not homogeneous in respect of involvement of elderly in different household activities, getting necessities of life by the elderly etc.

1.10 Research Methodology

The research methodology adopted for the proposed of study is detailed as follows:

Sources of Data

The study involves both primary and secondary sources of data. For collecting primary data, sample survey method has been employed.

Primary Sources of Data: Selected households (having at least one elderly people in the household) from selected (Malda and Jalpaiguri) districts of West Bengal.

Secondary Sources of Data: (a) Indian Census data for the Census years 1961 to 2011, (b) National Sample Survey Organization (NSSO) 60th Round (January–June, 2004), (c) Sample Registration System (SRS) Office of the Registrar General, (d) Profiles of Ageing 2017, Population Division, Department of Economic and Social Affairs, United Nations and (d) the compiled data on the elderly persons and related areas from the published sources etc.

Method of Sample Drawn

For the data on the elderly persons from households, four-stage sampling method has been applied. In the first stage, two districts out of nineteen districts of West Bengal have been selected based on Purposive Sampling: One is Jalpaiguri district since it is in top position having ST population among all the districts of West Bengal (our aim is to compare the population ageing and social security of ST and non-ST population of the Jalpaiguri district) and other is Malda district since it is most Muslim population dominated one among all the districts of North Bengal (our aim is to compare the population ageing and social security of Muslim and non-Muslim population of the Malda district).

In the second-stage, two blocks and one town have been selected from each two selected districts (in selecting blocks from the Jalpaiguri district, one block from blocks having at least 40 per cent ST population in total population and another block from blocks having at most 10 per cent ST population in total population have been selected and in selecting blocks from the Malda district, one block has been chosen from more Muslim population dominated and another block from less Muslim population dominated).

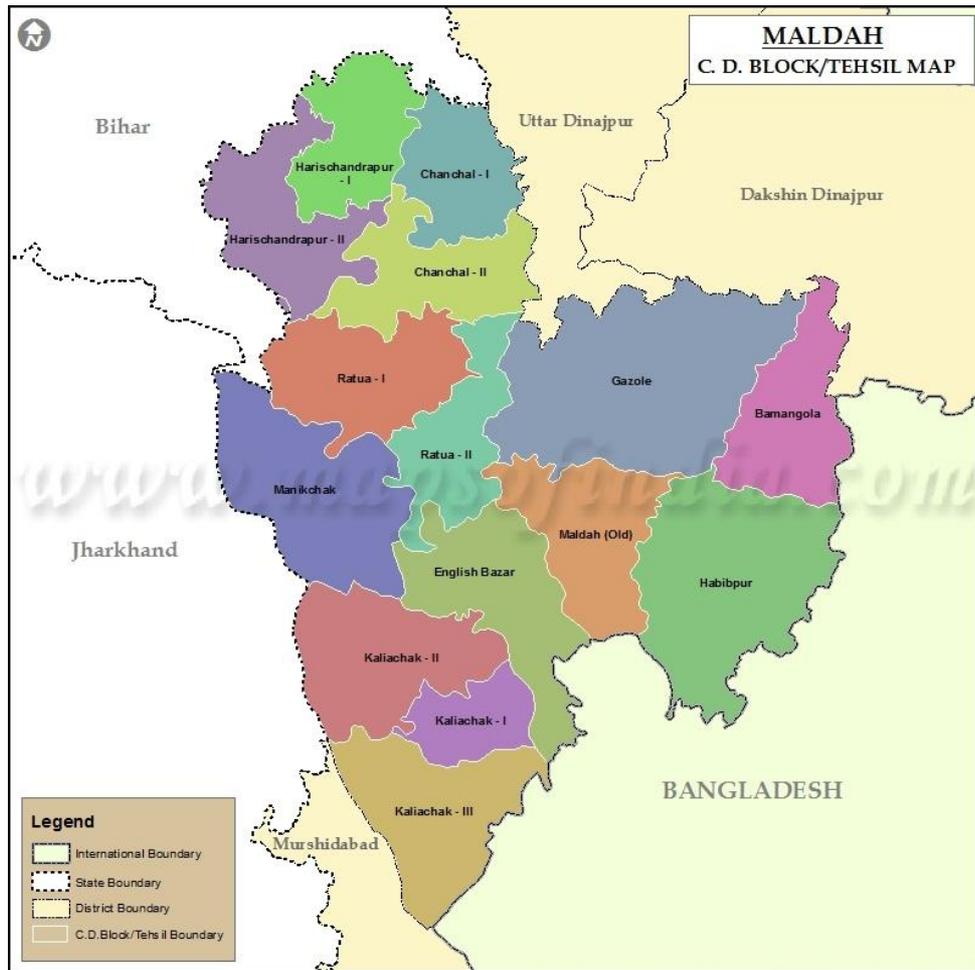
In the third-stage, two villages from all the selected blocks and one ward from all the selected towns have been selected. In the fourth-stage, twenty-five households having at least one elderly person (since our study is based on the elderly population) have been selected from all the selected villages and wards. In the second to fourth stages, Simple Random Sampling Without Replacement (SRSWOR) has been employed. While collecting data from the selected households, data from all the elderly persons of the households have been collected. Therefore, the number of sampled households in rural and urban areas of each of Malda and Jalpaiguri districts were 100 and 25 respectively, that is, in the ratio 4:1 (proportional allocation) because according to Census of India, percentages of persons living in rural and urban areas of Malda were 86.4 and 13.6 respectively and those in Jalpaiguri districts were 72.6 and 27.4 respectively. In our study, sampling units were households having at least one elderly family member. According to SRS Baseline Survey, 2014, about 75 per cent of households do not have elderly family members; therefore, taking sample size more than 25 from each of sampled village/ward may or may not be possible. Thus, we confined to consider sample size from each sampled village/ward as 25. The number of selected households from two districts: Malda and Jalpaiguri is $2 \times 125 = 250$. Collection of primary data has been completed in the year 2016.

Political maps of India and West Bengal are provided below.



Map 1.1: Political Map of India and West Bengal

Political maps of selected districts Malda and Jalpaiguri are given below.



Map 1.2: Political Map of Malda District (Map not to scale)



Map 1.3: Political Map of Jalpaiguri District (Map not to scale)

Chart 1.1: Sampling Technique for Comparing Ageing between Less Muslim and More Muslim Populations

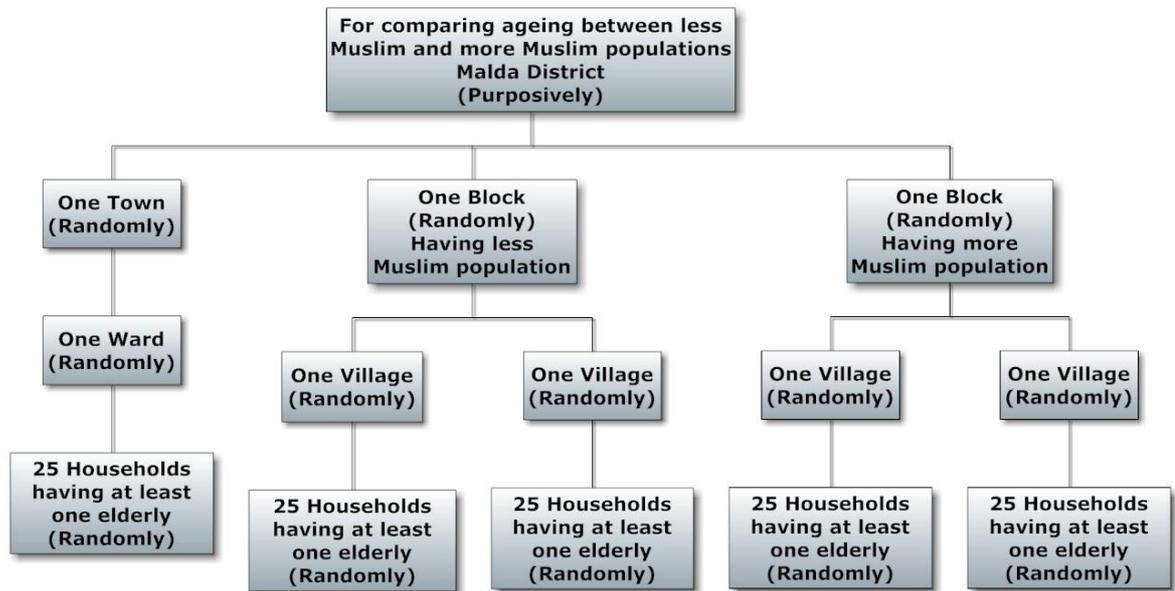
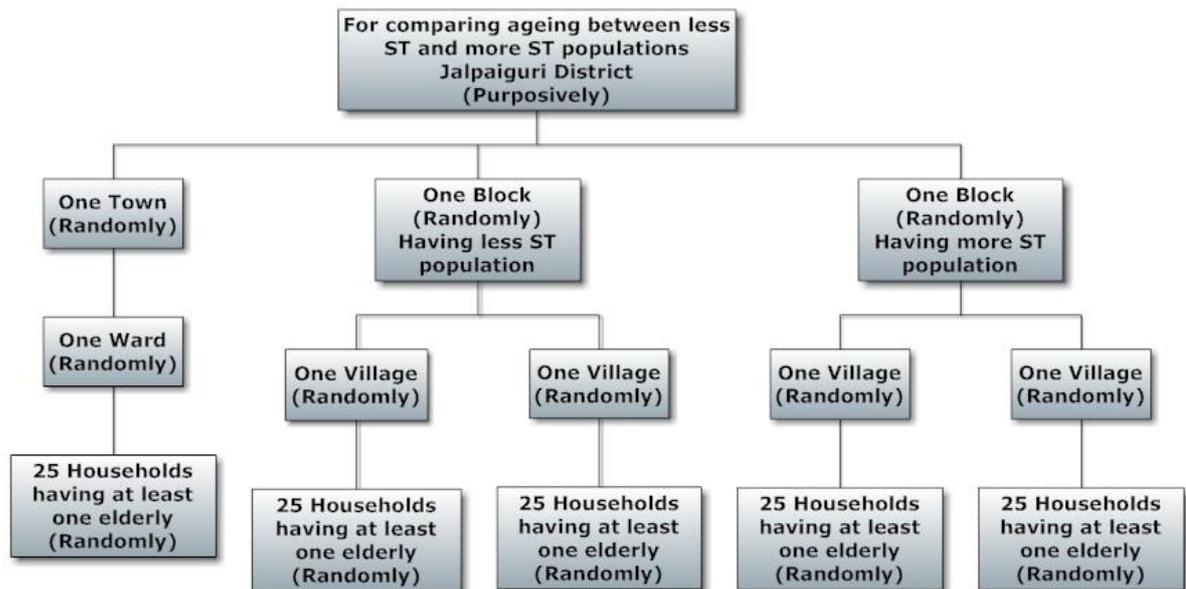


Chart 1.2: Sampling Technique for Comparing Ageing between Less ST and More ST Populations



Statistical software and methods used

1. IBM SPSS (Statistical Package for Social Sciences) ver 21 has been used for data analysis of primary data collected from Malda and Jalpaiguri districts in (a) creating frequency tables, (b) creating cross tables with chi-square tests for homogeneity/independence, (c) calculating percentages, (d) calculating averages and standard deviations, (e) testing equalities of averages using Analysis of Variance (ANOVA) one way classified data, (f) establishing binary logistic regressions, (g) Factor analyses coupled with Reliability analyses etc.
2. Microsoft-Excel has been used for data analysis of secondary data collected from mainly Censuses of India, 2001 and 2011 in (a) calculating different percentages, sex ratios etc, (b) calculating coefficients of correlation, (c) developing regression equations, (d) preparation of bar chart and (e) population pyramids (age-sex pyramids) etc.

P-value or level of significance (α) up to 10 per cent is considered for significance in testing of hypotheses as our study belongs to the category of social science.

Significant means prominent/important. In case of chi-square test for homogeneity, homogeneous means similar composition among different groups and its opposite is non-homogeneous. In case of chi-square test for independence, independence of different attributes in a population (or group) means no association or no link among different attributes in a population and its opposite is not independent or associated.

Per cents of elderly persons, decadal growth rates, per cents of total population, sex ratios, per cents of households by number of elderly family members, per cents of elderly working etc have been calculated using census data of India by the researcher.

1.11 Chapterisation

The study consists of the following chapters. The chapters are divided into several sections and sub-sections. A broad outline of each of the chapters is given below.

CHAPTER 1. Introduction

This chapter consists of (a) population ageing: an inevitable future prospect, (b) social security and elderly related social security, (c) historical development of the study area, (d) demographic determinants of population ageing, (e) population ageing,

economic growth, sustainable development and social protection (f) statement of the problem, (g) significance or scope of the study, (h) objectives of the study, (i) research questions and research hypotheses, (j) research methodology, (k) layout of the chapters and (l) limitations of the study.

CHAPTER 2. Review of Literature

This chapter consists of thematic presentation of review of literature on the sub-themes: (a) The Global context, (b) theories, approaches and processes of ageing, (c) measurements of population ageing, (d) well-being and the determinants of quality of life (QOL) of the elderly, (e) economics of population ageing, (f) directly related studies in the literature, (g) Specially and contextually relevant empirical research and (h) Identification of research gap.

CHAPTER 3. Trends and Pattern of Population Ageing in India and West Bengal and An Overview of Global Population Ageing

This chapter consists of (a) introduction, (b) population ageing in India and its trend, (c) population ageing in West Bengal compared to India, (c) an overview of global population ageing and (d) summary.

CHAPTER 4. Nature and Pattern of Population Ageing among Muslim and Non-Muslim Population in India, West Bengal and Malda District

This chapter consists of (a) Introduction, (b) Age-sex distribution of total population in India, West Bengal and Malda district, (c) Ageing in Malda district compared to West Bengal and India, (d) Ageing in Malda District on the basis of survey data and comparisons of ageing among Muslim and non-Muslim populations in Malda district and (e) summary.

CHAPTER 5. Nature and Pattern of Population Ageing among Scheduled Tribes (ST) and Non-Scheduled Tribes Population in India, West Bengal and Jalpaiguri District

This chapter consists of (a) introduction, (b) age-sex distribution of total population in India, West Bengal and Jalpaiguri district, (c) ageing in Jalpaiguri district compared to West Bengal and India, (d) ageing in Jalpaiguri district on the basis of survey data and comparisons among ST and non-ST populations in Jalpaiguri district and (e) summary.

CHAPTER 6. Population Ageing in India and West Bengal among Scheduled Castes (SC) Population

This chapter consists of (a) introduction, (b) population ageing in India and West Bengal among SC population and (c) summary.

CHAPTER 7. Constitutional Provisions and Government Programmes and Policies for the Social Security of Elderly Persons in India and West Bengal

This chapter consists of (a) introduction; (b) Indian Constitutional provisions for elderly, (c) legal measures, (d) policies and programmes for welfare of elderly in India, (e) pension systems in India, (f) professional services to elderly, (g) additional policies and programmes for social security of elderly in West Bengal and (h) summary.

CHAPTER 8: Summary of Findings, Conclusions and Suggestions

This chapter provides summary of findings, conclusions, suggestions and scope of future research.

1.12 Limitations of the Study

Population ageing is a multi-disciplinary topic. It is related to economics, commerce, sociology, anthropology, political science, demography, actuaries and medical sciences etc. Again, considering economics, many problems may be studied. The following problems are not covered in this study:

- Elderly residing in old age homes (paid or un-paid) covering the backgrounds of elderly in selecting old age homes for their shelter; their present living arrangement, social security, physical and mental conditions etc,
- Feasibility of reverse mortgage loan (RML) and its acceptance by banks for implementation and by the elderly,
- Economics of pension and insurance,
- Legal aspects, education and lifelong learning, access to information, as well as overcoming barriers that exclude or discriminate against elderly persons,
- Quality of life for the elderly etc.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Introduction

Literature review for the proposed subject and area of research are based on books, unpublished thesis, articles in periodicals, online collections, presentations etc. The major sub-topics of the present study are (a) ageing in India: (i) state-wise and (ii) district wise within West Bengal, (b) socio-economic status and health condition of the elderly in West Bengal, (c) socio-economic status and economic activities of the elderly persons in West Bengal, (d) socio-economic status and involvement in decision making of the elderly persons in West Bengal, (d) Socio-economic status and household relative activities of the elderly persons in West Bengal, (e) support and care for the elderly persons in West Bengal, (f) socio-economic status and well-being of the elderly persons of West Bengal.

2.2 Theoretical/ Development Perceptive on the Research Problem

2.2.1 The Global Perspective

The First World Assembly on Ageing sponsored by the United Nations Organization(UNO) held at Vienna in 1982 realised population ageing as a global issue, not only concerned to developed countries but also to large part of the developing countries. Till the Vienna Assembly in 1982, the study on population ageing was exclusively based on the experiences of developed countries, since then various studies had been done on population ageing related to developed and developing countries by the agencies of UNO and at the country level. The plan adopted at the Vienna Assembly emphasized much on solidarity of the family, though the growing damages in the family system in the West were obvious to the delegates (Bose & Kapur Shankardass, 2004).

The official document presented by the Government of India (GOI) in Vienna expressed the view that in India, the elderly persons are well integrated with the society and the welfare of them was linked with the main stream of social and economic development of the country. The United Nations International Year of the Elderly Persons in 1999 emphasized for the marginalization of the elderly persons in the development process and for the need to develop ‘a society for all ages’. The Second World Assembly on Ageing was held in Madrid in 2002. The Madrid Plan of Action (2002) thought about

(a) a developmental approach for the elderly persons emphasizing in the mainstreaming of the population ageing and elderly persons into policies and planning, (b) changing demographic, economic and social systems requiring adjustments in macro level policies on social and economic securities like pension, healthcare, long term care and support systems, (c) to maintain economic growth and development by review process of existing policies to ensure and promote the idea of equity, mutual support, solidarity among the generations. The plan also emphasized poverty as the foremost structural damage to the traditional mutual support system in families (Saha, 2006).

2.2.2 Theories, approaches and implications of Ageing

There are various theories, approaches, interpretation and aspects of the process of population ageing and the elderly persons as a social category. These processes are biological, physiological, psychological, socio-economic, cultural, spiritual and political in nature. The physiological approach associates the elderly persons with the process of physical ageing and interprets their role performance with the deterioration of their physical health. The psychologists associate and interpret the problem from the view point of decline in their mental health and emotional status. The sociologists and the cultural approach associate and interpret population ageing with the social norms and cultural values. The politicians associate and interpret the elderly persons as their vote-bank and the elderly persons may utilize political advantages for social security and health measures for themselves. The economists associate and interpret the elderly persons in the view point of their possession and sources of economic resources which may be utilized for their livelihood in their rest of life (Paul Chowdhury, 1992).

The ageing in developing countries has been explained by *modernization theory* where the deteriorating conditions in the lives of the elderly persons are due to modernization. Modernization theory argues that industrialization and urbanization undermines the status of the elderly persons. It is also referred as '*golden age*' *theory of ageing*. Greater mobility of young and working people allows them to be free from the authority of the elderly persons in the family. *Dependency theory* relates the deteriorating conditions of the elderly persons compel the elders to be dependent on the existing social and economic structures (Saha, 2006).

Again there are two major known theories about the status of the elderly persons:

- (i) Engagement versus disengagement theory– (a) Role theory, (b) Ashram theory.

(ii) Integration versus segregation theory– (a) Integration theory, (b) Social Adjustment.

In regard to the engagement versus disengagement theory, there are three major approaches for the elderly persons - (a) Activity approach, (b) Passive or disengagement approach, (c) Development approach.

In regard to activity approach, the elderly persons may be engaged to work which they postponed to the elderly age. In regard to passive approach, the elderly persons withdraw themselves from social activities; accept a secondary position transferring family responsibility to the younger generations and reduces social participation. The development approach is developmental, preventive and life-enhancing approach rather than curative. According to this approach, the necessary tasks for the rest of life may be done by the elderly persons - (a) redefinition of social identities with development of new social and economic goals, (b) linkage of past and present to the future for the betterment of family, associations, services and communities etc. (c) development of new self-image and sense of integrity etc. The elderly persons were the integral part of the family, but they are separated from their families and societies for various reasons which led to the loss of many roles of the elderly persons. Retirement is a context of role theory which may depend on how an elderly person is able to replace the work and activity roles by other roles (Activity approach). In ashram role, the elderly persons withdraw oneself from his/her work and devote time for the service of community. After some years, the elderly persons completely dis-engage from all affairs and devote oneself for self-expression (Passive approach). Integration theory for the elderly persons is the integration of role theory and ashram theory which leads to integration of these two roles, integration of old values and new values, engaging oneself in house-keeping, child-care, shopping etc. Social adjustment role is an adjustment by the elderly persons with the family and the community where the elderly lives (Paul Chowdhury, 1992).

Active ageing, a new concept deployed by the European Commission, the World Health Organization (WHO), used in Human Resource Management (HRM), evokes the idea of longer activity, with a higher retirement age and working practices adapted to the later age of the employee. It also extends to the social engagement of the elderly persons, according to which elderly person's well-being relies on them staying active in their elderly age, again staying active is key to successfully ageing (visit <https://www.revolvy.com/main/index.php?s=Active%20ageing>). The Active Ageing Index (AAI) score for individual countries shows the extent to which their elderly

persons' potential is used, the extent to which elderly persons are enabled and encouraged to participate in the economy and society and to live independently. Active ageing index is highly positively correlated with (a) life satisfaction (well-being) of elderly persons and (b) gross domestic product (GDP) of the country. The determinants of active ageing are participation, health and security of the elderly persons. Active ageing applies to both individuals and population groups.

2.3 Measurements of population ageing

There are different indicators for measuring population ageing, these are:

- (a) Proportion of aged 60 and above (Percent of elderly): This is the most frequently used measure of population ageing which is the per cent of persons aged 60 and above in the total population. Population would be considered to be young, youthful, mature and old according as population having less than 4 per cent, 4 to 6.9 per cent, 7 to 9.9 per cent and 10 or more per cent of people aged 60 and above in the total population. The UNO suggests that a 7 per cent number is enough to say the population as aged (Dhar Chakraborty, 2004 and Saha, 2006).
- (b) Median Age: It may be defined as the exact age that divides the age distribution into two equal halves. Population would be considered to be young, in intermediate stage of the ageing process, aged according as population having median age below 20 years, between 20 and 29 years and 30 years and above.
- (c) Proportion of Children under 15 years of age: It is the per cent of children under 15 years of age to the total population. Population with a value below 30 is considered as old.
- (d) Aged-Child Ratio (or Ageing Index): It is the per cent of the number of elderly persons to the number of children. A population having a value of over 30 is considered as aged.
- (e) Expectation of life at birth (or life expectancy at birth): It is an indication of population ageing. e_x^0 is the expectation of life at age x. e_0^0 is the expectation of life at birth. Similarly e_{60}^0 , e_{70}^0 and e_{80}^0 are expectation of life at age 60, 70 and 80 years respectively. If the life expectancy at birth increases, the number of elderly also increases, as a result, different measures of population ageing also increase.

Generally female life expectancy at birth is found to be higher than that of males in many countries.

- (f) **Dependency Measures of Population Ageing:** These measures are not utilized for measuring the population ageing, but for the social and economic dependency created by the population ageing. Some of these measures are:
- (i) **Old Age Dependency Ratio (per cent):** It is the ratio of those 60 years and above to the persons of aged between 15 and 60 years of age.
 - (ii) **Potential Support Ratio (PSR):** It is the number of persons aged 15 to 64 years per every person aged 65 years and above.
 - (iii) **Parent Support Ratio (PaSR):** It is the number of persons aged 85 years and above per 100 persons in the age group 50 to 64 years.
 - (iv) **Youth Dependency Ratio:** It is the number of persons aged up to 14 years per 100 persons in the age group 15 to 64 years.
 - (v) **Total Dependency Ratio:** It is the number of persons under age 15 plus persons aged 65 and above per 100 persons aged 15 to 64 (Dhar Chakraborti, 2004).

2.4 Different Securities in Old Age

Security for the elderly persons is of different types and dimensions. A person has security from (1) his/her physical environments, (2) physical fitness and absence of disease, (3) economic or financial status, (4) social status and authority, (5) sense of belonging and being wanted and utilized, (6) purposeful life having regular work and a sense of achievement and (7) human contacts etc (Paul Chowdhury, 1992).

Social Security for the Elderly

Question of social security remains in human life from his/her early life to death and even after death. It measures the opportunities to prevent poverty, dependency and family disintegration. Its foundations are liberty and dignity of personality of the human being. Social welfare programmes would be inefficient without a system of social measures. Its measures will be incomplete without supplementary social welfare services. There are three methods of social securities (a) social assistance, (b) social insurance, (c) gratuity, pension, provident fund and other retirement benefits. A social assistance

provides benefits to persons of small means sufficient to meet the minimum standard of needs, financed from tax-funds. Social insurance provides benefits to persons of small earnings out of funds collected from the insured as his/her contributions and the subsidies from the employer and the state. Social assistance for the elderly persons may include health care services, financial assistances for food, cloth, living arrangements, daughter's marriage etc. Government and some private sector employees are entitled to avail the gratuity, pension, provident fund and other retirement benefits after their retirements. Gratuity, provident fund, leave encashment, commutated pension are provided to the retired person one time just after his/her retirement and pensions are provided to the retired persons monthly. Even after the death of the retired person, some fraction of pension earned monthly by him/her are provided monthly to his/her nominee(s) up to the death of the nominee(s) (Paul Chowdhury, 1992; Brown, 1997). There are various other measures of social securities for the elderly persons like (a) reverse mortgage loan, (b) micro-financing, micro-credit, micro-insurance etc. (Chatterjee, 2005; Ahuja, 2005 & Federal Ministry for Economic Corporation and Development, 2006). There are provisions for life insurance for elderly persons, even up to the age of 95 as well as plans that cover the elderly persons the rest of life and beyond the life. Such insurances for the elderly persons are for (a) burial life insurance, (b) term life insurance etc.

Poverty for the elderly persons has a strong gender dimension. Life expectancy for women is higher than for men, therefore elderly women may be in poverty for a longer period of their lives. Chance of losing life partner for a woman is higher, and women are less likely to remarry than men. In some societies, they have to deal with exclusion due to the stigma of widowhood. The worldwide pension coverage pattern also has a strong gender dimension. In most countries, the women are less represented in the formal economy than men are, and are therefore contributing relatively less to social insurance pensions. There is a gender bias that women are often employed in jobs with lower pay than that of men. Women may have fewer years of services – either because of they interrupt their careers to look after their children and other family members or for other care responsibilities, or because of women are encouraged to leave their labour market earlier than men. If the pension scheme is based on individual savings, women may have comparatively lower pensions than men. Generally, the husband contributes to a social security pension scheme, while his wife is dependent on his pensions. This is the classic model of the male breadwinner. In this case, women are entitled to derive pension rights

which are typically lower than for men. In case of a marriage break-up, there is generally no splitting of pension claims between husband and wife. In the best of cases, wives will then be eligible for lower-level tax-financed pension assistance benefits. In most cases, neither husband nor wife is entitled to social security pension, since they have worked in the informal economy. In that case, income security in elderly age depends on accumulated assets over life, such as savings, housing, livestock and land etc. Levels of benefits received from the social security pension system are of course dependent on resources invested. High-income countries spend on average 6.9 per cent of their Gross Domestic Product (GDP) on social security old-age pensions (slightly more than the average they spend on social health protection); middle-income countries only 2.1 per cent of their GDP; and low-income countries 0.6 per cent. Pension spending per person after retirement age in a country, expressed as a per cent of its GDP per capita, is an average of 56 per cent in high-income countries, 33.2 per cent in middle-income countries and 17.8 per cent in low-income countries. Share of population after legal retirement age in receipt of a pension and active contribution to a pension scheme in the working-age population in the world are 40.2 and 26.4 per cent respectively (these are high in high-income countries and low in low-income countries, these figures in India are 24.0 and 6.4 per cent respectively). The International Labour Organization (ILO) believes that a guaranteed basic pension for all the elderly persons should be one of the components of the set of social security guarantees referred to as the social protection floor (ILO, 2010).

Health care is certainly the most complex of social security branches. Social health protection is defined by ILO as a series of public or publicly organized and mandated private measures against social distress and economic loss caused by the reduction of productivity, stoppage or reduction of earning, or the cost of necessary treatment that can result from ill health (ILO, 2010). Health care in India is generally, financed through out-of-pocket (OOP) payments of individuals, central and state government tax revenues, payments from employers, external aid, private sector profits and other sources. Indian national health accounts reveal that the government sector (central, state and local) together account for around 25 per cent of the total health expenditures (representing around 3.6 per cent of GDP – among the lowest in the world), external aid via voluntary sector for 1 per cent and 91.4 per cent take the form of out-of-pocket payments – one of the highest percentages of the world (WHO, 2006). Since the availabilities of funds with the governments for the support services for health cares,

insurances for the elderly persons and others also and pensions are very limited, there are Public-Private Partnership (PPP) models to provide such support services by the private sectors efficiently and effectively to public including the elderly persons' saving the costs of the governments (Valsangkar, 2000). Globally in 2006 (according to WHO), expenditure on health was about 8.7 per cent of GDP, with the highest level in the America at 12.8 per cent and the lowest in the South-East Asia Region at 3.4 per cent. The share of government in health spending varies from 76 per cent in Europe to 34 per cent in South-East Asia. Where government expenditure in health is low, the shortage is made up of low-income countries by private spending, about 85 per cent of which is out of pocket. External resources are becoming a major source of health funding in low-income countries. From a share of 12 per cent of total health expenditure in 2000, external resources represented 17 per cent of low-income country health expenditure in 2006. Governments face increasing pressure on public finances for the provision of public services, particularly healthcare expenditures. Many low-income countries lack the facilities necessary to provide basic healthcare services and products. Most countries also face shortage of trained medical personnel (Nayak et al, 2011).

2.5 Well-being and the Determinants of Quality of Life (QOL) of the Elderly

Well-being and quality of life are subjective matters mostly depend upon personal perceptions and adjustment in stages of life. Elderly persons have significantly poor subjective well-being than middle aged persons. Most rural elderly persons exhibit negative self-perception, especially those belonged to better off classes. The elderly persons in non-institutionalized settings are better on psychological well-being and less depressed than those in institutionalized settings. Ill health and disability are the most important factors affecting in becoming well-being of the elderly persons. Besides this, financial position (financial self-sufficiency) and support, living arrangements, family environment, mobility, belongingness, social integration, care arrangements, emotional support, marital status, educational attainment, orientation, physical independence, occupation etc are the components for becoming well-being of the elderly persons. Well-being and quality of life are very much associated with each other. Determinants of quality of life are physical and mental health, mobility, social functions, physical and emotional roles, housing satisfaction, perceptions of neighbourhood condition, current health, safety, support from friends, access to basic services, financial condition and

support, achievements, stress and strain etc (Panda, 2005). It may be mentioned that living within a family does not guarantee positive physical and mental health and living alone need not imply social isolation.

2.6 Economics of Population Ageing

The economic aspect of an economy affected by population ageing has two sides (a) increase in the number of the elderly persons and decline in rate of population growth resulting in reduced growth rate in both aggregate demand and investment meaning lower capital formation (macroeconomic phenomenon) and (b) the impact of ageing upon autonomous individuals in the form of economic behaviour over the lifecycle (microeconomic phenomenon). Life Cycle Hypothesis (LCH) provides how individuals' savings depend not only on their current income but also on their anticipated future situations in the elderly age when their earnings reduce sharply, people save earnings at their younger ages for their use in their old age transferring resources to their elderly age through savings. Dis-saving (spending more than one has earned in a given period) occurs in the elderly age of the elderly persons. As the number of elderly persons increases, reduction of aggregate savings is predicted due to dis-savings. The elderly person not only dis-saves, but also spends less on consumption goods and services. This microeconomic behaviour of the elderly persons affects national production, consumption and capital formation (macroeconomic effect of the ageing) (Saha, 2006).

2.7 Directly Related Studies in the Literature

Our research study is 'Population Ageing in West Bengal with special reference to Social Security'. This study also includes (a) nature and pattern of population ageing among Muslim and Non-Muslim population in West Bengal with special reference to Malda district, (b) nature and pattern of population ageing among Scheduled Tribes (ST) and non-Scheduled Tribes population in West Bengal with reference to Jalpaiguri district, (c) population ageing among Scheduled Castes (SC) population and (d) policies and programmes for social security and Indian Constitutional Provisions for maintenance of elderly persons in India and West Bengal. Very few literatures have been noticed which are exclusively on West Bengal. Several literatures have been noticed studying the following topics related to population ageing of different countries in different periods.

Ali et al. (2001) conducted a study on displaced (due to land acquisition) elderly persons in the rural areas: Kolaghat (East Midnapore) and Kharagpur (West Midnapore),

West Bengal. Tribals, Hindu and Muslim elderly people made up the sample population. Age sex composition of the elderly persons, perception about elderly age by respondents, type of tasks performed by elderly persons, perception of the necessity of the elderly persons in family and society were reported. According to the study, 68.18 per cent of the elderly persons reported that their ability to work decreased, 43.18 per cent and 45.45 per cent of the elderly persons were involved in looking after small children and in household work respectively. Regarding perception of the necessity of the elderly persons in family and in society, 47.73 per cent, 38.64 per cent, 36.36 per cent, 27.27 per cent, 25 per cent, 27.27 per cent, 13.64 per cent of the elderly persons reported about their needs because of looking after the house, looking after children, guard the house, providing useful advice, knowing a lot, helping in religious rituals, helping settlement of disputes. Some elderly persons reported that there was a break up of family after being displaced; quality of their food in the family had been worsened. Many elderly persons reported that their health deteriorated after displacement.

Chakraborty (2005), based on 1991 census, reported different socio-economic characteristics of the elderly persons like literacy, marital status, living arrangement, economic conditions, morbidity, health seeking behaviour in India. He conducted a sample survey (using cluster sampling method) to study health seeking behavior of elderly population of a rural block of North 24 Parganas in West Bengal. Chronic and acute diseases that elderly persons perceived to be suffering from at the time of interview were recorded. Several conditions affect health-seeking behaviours. They may be at individual, households and community level. Treatment of chronic condition (dependent variable: binary) was enquired and grouped as (a) regular, (b) irregular. Age, education, occupation, sympathetic, care, distance, long waiting time at hospitals were considered as independent variables. Based on sample survey data, distribution of the elderly persons by age and sex for socio-economic and health, treatment characteristics etc were presented. Chi-square tests were employed to study the associations between socio-economic status and treatment regularity. Step-wise binary logistic regression was employed to study the treatment and socio-economic factors contributing to the irregular treatment. Monetary constraint was a single dominant (75.3 per cent) factor contributing to irregular treatment. Distance (51 per cent) and lack of support to accompany elderly were other reasons for their irregular treatment. Over 50 per cent of elderly (65.4 per cent men and 46.4 per cent women) used some form of tobacco. Over 70 per cent of the

elderly persons had chronic diseases and 54.4 per cent of them more than one disease. Mental and vision ailments got the maximum attention from the elderly persons. Over 60 per cent of elderly persons had mental problems where it was 53.8 per cent for vision problems.

Roy (2010) conducted a study on status of elderly persons in the tribal society (Lepcha) of Darjeeling district of West Bengal. The elderly persons are treated differently in different societies and the complexities of them vary over times and societies. Tribal societies are simple, easy and straight forwards even today and are free from most of the complexities and complications of modern civilized societies. Primary data was collected from the elderly persons from four Lepcha dominated villages (two villages were very near to town and other two were far off town). Some tables on family size, age and sex distribution of populations, engagement of elderly persons in earnings (direct, indirect) were created. In case of Lepchas, the elderly persons are never considered as burden, but they are respected and are considered as assets of the community. Elderly persons in Lepcha community play indispensable role in preserving Lepcha culture, custom, language, religion in their society.

Mallick (2011) pointed out that tribal development in West Bengal is directed towards ensuring an immediate boost to agricultural production in tribal areas, improve economic conditions of the landless among the tribals, recognise the co-operative and marketing structures, and to provide employment and increased income to the tribals. Family-based economic programmes include land reclamation, land development, supply of agricultural inputs and the like. The area-based economic programmes include construction of roads, execution of minor irrigation and lift irrigation schemes and so on. Although, the tribals are in the process of transition from a traditional society to a modern society, they are going through the process of institutionalised exploitation and socio-political marginalisation. They are not health conscious and yet practice traditional methods of medicine.

The study of Kejriwal (2011) on socio-economic condition of elderly people in Siliguri (West Bengal) and its adjoining rural areas tried to (a) observe and identify socio-economic aspect, (b) occupational structure, (c) living conditions of the senior citizens and (d) analyse the implementations and enforcement of government schemes and policies among them.

Nayak, Bagchi and Nayak (2011) presented in the Indian scenario, population ageing, health problems for the elderly persons, provisions for social security, privileges and benefits; human rights and provisions for healthcare etc for the elderly persons, mental health, health care law etc.

Maulik et al. (2012) has explained that background of ongoing economic development and consequent change in family structure, made the rising elderly population lose their relevance in their own house and they started feeling lonely and depressed. They conducted a study on the elderly population in Singur Block of Hooghly district of West Bengal to assess the psychological status of a population aged 60 years and above.

Islam and Nath (2012) pointed out in Bangladesh, the future journey of the elderly persons support capacity with economic and caring aspects. The society changing along with the economic hardship would be serious threat to the elderly persons support system in Bangladesh. It was the high time to think about the problems of elderly persons and to take long-term sustainable aging policies to face the future problem.

Roy (2013) in his paper aimed to present an emerging scenario of population ageing in West Bengal on the basis of past trends. It was found that the elderly population in West Bengal has been growing in a faster rate than all India average. The current trend of population ageing also reveals the fact that, in future, there will be larger proportion of elderly population in the state, with higher age and majority of them would be women for whom better social security measures would be needed. It is the need of the hour to study the ageing processes in West Bengal, so that, its implication for the elderly population in particular and society at large could be judged.

Alam et al. (2014) has delineated the status of elderly persons in West Bengal- income and asset holding among elderly persons, living arrangement and family relations, health status including mental health, morbidity, hospitalization, access to health care and financing, social security in elderly age etc.

Sharma (2014) has discussed about government policies and programmes for the elderly persons in India. He has mentioned that the goals of the policies are the well-being of elderly persons aiming to help elderly persons to live the last phase of their life with purpose, dignity, good health and peace etc. The nation would extend support for financial, health care, shelter, welfare, protection against abuse, provide available

opportunities for their potential development, seek their participation, provide them services so that they can improve the quality of their lives and other requirements. The paper also mentioned Indian Constitutional provisions, legal measures and different services being provided to elderly persons.

Mane (2016) mentioned that population ageing in India is exponentially increasing due to impressive gains in increased life expectancy. An ageing population puts an increased burden on the resources of a country creating both medical and sociological problems. Elderly persons suffer high rates of morbidity and mortality due to infectious diseases. Ageing problems attribute to the different levels of socio-economic development, cultural norms and political contexts. Hence it would be a herculean task for policy makers to address the geriatric care that would take into account all these determinants. Care for the elderly persons is fast emerging as a critical element of both the public and private concern. Elderly persons require lifelong drug therapy, physical therapy and life-long rehabilitation. They tend to be cared for a variety of setting: home, nursing home, day-care centre, geriatric out-patient department, medical unit of intensive care centre unit.

National Institute of Rural Development & Panchayati Raj, Hyderabad (2016) in Policy for the Aged: Opportunities and Challenges highlighted different policies for social securities for the senior citizens in India and recommended for their welfare. It also mentioned the initiatives taken by different Indian states and union territories including West Bengal.

Rahman (2017) mentioned that elder abuse and neglect was a burning issue in Bangladesh. Bangladesh government had taken policy, namely, national policy on ageing in 2007 to ensure the dignity, social security, health care etc; allocated some fund for the nongovernment institute named 'Bangladesh Association for the Aged and Institute for Geriatric Medicine' (BAAIGM), had taken old age allowance program, national health policy for the elderly persons in the society. Many non-government organizations were continuing programs related to elderly persons. But these were limited and insufficient for huge number of elderly persons.

2.8 Spatially and Contextually Relevant Empirical Research

Paul Chowdhury (1992) presented the per cent of population aged 65 and above, related data in selected countries, 1850-1970 and its projections up to 2025. He also presented

some data on population 60+ in India, 1981. His findings indicate that the number of aged 60+ in India increased by 22.40 per cent during 1951-61. The increase in 1971 rose to around 32.32 per cent but fell to around 32.02 per cent in 1981. India is around 40 years behind the West in life expectancy. India would be expected to reach the level of life expectancy of the West only by the year 1921.

Dandekar (1996) provided international (UNO, 1988) and national (state-wise) (NSSO 42nd Round) demographic and socio-economic data compared aspects of ageing in Maharashtra with India. The profile of the elderly of Maharashtra was not very different from other states of India. There are many old age homes (OAH) in Maharashtra. No body likes to leave home and live in OAH. Sometimes circumstances compel them to go to OAH. The OAHs in Maharashtra present a picture of useful institutions badly needed for homeless, helpless or childless. The situation of elderly persons in rural areas of Maharashtra were studied through field survey, sample of villagers from eight villages in four subdivisions of Maharashtra was taken to study the elderly-age problems in rural areas. Socio-economic, workforce, activity, social security etc of the elderly persons in rural Maharashtra obtained from field survey were presented. In the absence of modernization, the elderly persons in the villages did not seem too worried about their problem of elderly age, they often depend on their neighbours when needed. Most of them depend on agriculture and they did not have any retirement. Poverty is the part and parcel of their entire life.

In the thesis 'Economic Security for an Aging Canadian Population', Brown (1997) reported for Canada, the demographic, economic and political background; sources of retirement income security; health care and economic security; recent amendments to Canada's retirement income security system; social security reform; a wealth transfer model to assure total security funding stability. While presenting about Canadian demographic, economic and political background; economic security; social security reforms etc, data on same for different countries had been present for comparisons. Early retirement is more common for the economically and socially advantaged, while the converse is not true for late retirement. Many who retire early are capable of further contributions to the production of goods and services. For males, most important factors for early retirement are (a) having job-related pension; (b) personal income; (c) early retirement incentives and (d) home ownership. For females, the reasons

for the same are (a) for care giving; (b) spouse's desire for retirement etc. The Canadian social security system is worth saving.

Rajan et al. (1999) have presented socio-economic, ageing data of India along with states and territories for 1961-1991 and projections for 2011-2021. They have suggested different policies and programmes for social security implemented in India with special reference of Kerala.

Rao (2000) conducted a study on the socio-psychological problems of the elderly persons residing in old age homes (OAH) in Karnataka selecting four OAHs (two are paid OAHs, others non-paid OAHs) and concluded that in general socio-economic and demographic factors do have substantial influence on elderly persons in making decision to stay in OAH, but the main reason seems to be the differences in the value system of the elderly persons and younger generations. The number of OAHs is increasing day-by-day, Kerala is having maximum number of OAHs.

Rajan (2000) stated that Kerala is ahead by 25 years from the rest of the country and in the final stage of the demographic transition. He provided ageing scenario including work participation and non-workers for Kerala district wise and sex wise from 1991 and different social security scenario of Kerala from 1983-84 to 1993-94. He assessed that if the government could implement all the schemes very seriously and provide assistance to the real needy elderly persons, Kerala can continue to run the social assistance schemes without much financial constraints.

Rani (2000) studied tribal elderly population in Kerala and reported that they have longer life span and good health because of pollution-free atmosphere. They work in fields and are not idle at homes. The elderly age problem is not serious among the tribals.

Sivamurthy et al. (2001) discussed about the care and support for the elderly persons in India based on a survey of the elderly persons in four villages of rural North Karnataka (India). The Governments in India both central and state and some NGOs have been providing care of the elderly persons. However, family still plays the most important role in India in providing the same. Surveyed data was collected from the elderly persons in four villages of North Karnataka. Surveyed results are: 58.9 per cent, 88.2 per cent, 28.4 per cent, 28.0 per cent, 59.7 per cent of respondents expressed for elderly persons are respected by the family members, are better taken care of before, have health problem as main problem, have health and economic problem as main problem, may consider son

as of best help in very elderly age respectively. Discriminant analysis for headship status was done and it is inferred that contribution to family be the most powerful variable for headship. It was observed that the proportion of the elderly persons being head of the households is higher among lower economic status households than among higher economic status households.

Bose and Kapur Shankardass (2004) presented figures on population ageing and related data of the different states of India consisting (a) growth of 60+ populations, 1951-2016, (b) characteristics of 60+ population, 60+ workers, economic security, living arrangements, disability and chronic illness, 60+ widow and widowers: district wise for states, 1991, (h) micro survey of 60+ persons in a middle class locality in New Delhi, (i) international comparisons: elderly in Canada, (j) global perspectives: UNO projections. Per cent of 60+ population in 1991 in Kerala and West Bengal were 8.8 and 6.1 respectively.

Paul Singh (2002) stated that the percentages of elderly population in India were 5.63 in 1961, 5.96 in 1971, 6.49 in 1981, 6.58 in 1991 and 7.45 in 2001(Census of India). India is an agriculture dominated economy where 70 per cent population lives in rural areas and is dependant on agriculture and allied occupations. The persons aged 60 years and above represent about seven to eight per cent of the population, most of them are living below poverty line. The elderly persons in the unorganized sector are economically in desperate position. Economic hardship, health problems etc are the major problems faced by the elderly persons. A field work undertaken by the researchers in the rural areas of Haryana to study the social position, adjustment problems, physical status and health problems of the landless elderly persons in Haryana. Demographic, socio-economic, health status of the respondents has been provided. The major finding are: (a) Majority of them were in the age group 60 to 70 years and there was a sharp decline in their population after 70, (b) health problems increased with advancing age, (c) the government run hospitals/PHC etc did not have proper facilities for the elderly persons, (d) majority of landless rural elderly persons depended on quack/untrained medical practitioners, (e) they did not have secure source of livelihood, (f) they were dependent on daily labour, in spite of their poor health, disabilities etc.

Rajan (2002) studied 'Oldage Allowance Program (OAP) in Nepal'. Demographic, social and economic indicators for Nepal, 2001 were provided. Data on old age allowance program beneficiaries, trends in expenditure of OAP, elderly persons 75

and above etc in Nepal are also provided. In Nepal, one out of every 100 persons is an elderly 75 and above and 8 out of 10 of them are enjoying old age allowance. Sample data was collected on 197 elderly persons from villages and municipalities in Nepal and corresponding results have been reported. It is reported that the family mostly care of the elderly persons in Nepal. Nine out of ten elderly persons received pensions regularly (three times annually).

Rajan et al. (2003) studied 'Economics of Pension and Social Security in South Asia: Special Focus on India, Sri Lanka and Bangladesh'. Demographic, socio-economic, ageing data for these countries were provided. Besides the economic, social, health data from official publications, other secondary sources, a sample survey was conducted on these three countries to obtain field data on these issues. Demographic, socio-economic, ageing, sources of care and securities data based on surveyed data for these countries were provided. All governments in South Asia slowly shift from defined benefit pension scheme to defined contributory scheme. Contributory provident funds suffer from several limitations; two of them are frequent withdrawal from the fund and one time payment at the time of retirement. Countries in South Asia should increase their retirement age in view of increase in life expectancy. Collective care arrangement in elderly age is a concept practiced in Kerala. The Welfare Fund Model of social security for unorganized sectors may be initiated in other states in India and in other countries in South Asia.

Dhar Chakraborti (2004) discussed population ageing in the context of Asia. Based on UNO data and Indian census data, indices of demographic and ageing, socio-economic characteristics and workforce participation of elderly persons, health conditions, national health expenditures and related figures for 1950-2050 for different world regions particularly Asia including India have been provided. Ageing of the population of low developed countries (LDC) is more than fifty years behind as compared to the situation in more developed countries (MDC). Labour force participation rate (LFPR) of the elderly for 1950-2050 for world, MDC and LDC have been presented. There is a decline in LFPR of the elderly persons throughout the world. Correlation coefficients, regression equations between proportion of elderly and total fertility rates (TFRs) for different regions of the World have been presented. Population ageing has been increasing unevenly throughout the world and has many serious developmental linkages in economic and planning in developed and developing countries. According to

Dhar Chakraborty, a detailed and careful economic analysis on population ageing is a burning need of the present days.

Panda (2005) conducted a study on 'Elderly Women in Megapolis Status and Adjustment'. The study has urged both secondary and primary data. Primary data covering family background, economic condition (past and present), economic security, feeling of security-insecurity and loneliness, involvement in decision-making, willingness-unwillingness in doing household work, health and well-being, social acceptance and social adjustment, life-satisfaction etc of the elderly women were collected from the elderly women in Pushp Vihar Colony and Saket in South Delhi. A number of cross-tables were created and inter-linkages between variables were studied. A number of tables of averages were also created. Some of the major conclusions about the elderly women derived from the study are: Deterioration in health, strength, and impairment, certain ailments are common. These accompany reduced autonomy in activities of daily-life, (b) they are frail, especially those in old-old age-group, need more care and attention, (c) many of them faced adjustment problems, (d) there is a shift in the role of elderly women from a 'provider' to a 'dependent', (e) many children are less mindful about elderly women in the household, (f) they sometimes feel lonely, alienated, insecure and neglected, (g) a large proportion of them do not have acute or visible economic problems etc.

Research study in Population Ageing in Tripura by Saha (2006) was mainly based on sample survey data. Based on Indian census data for elderly persons : 1901-2001, she presented the figures on (a) demographic characteristics, different indices of ageing, burden of population ageing, work participation rate and elderly workers for Tripura, (b) number and proportion of elderly persons, annual average growth rate of elderly in north-eastern states of India. She presented expenditure on pension payments: 1999-2003 to the elderly, beneficiaries of NOAP in Tripura by Government of Tripura. Based on field data, she presented the figures for elderly persons: Age distribution, socio-economic profiles, sources of basic facilities, living arrangement, household income, educational level, health conditions, work participation, economic security, sources of subsistence, care givers, reasons for moving to OAHs, data on surveyed OAHs. She employed Z (standard normal) test for comparing proportions. Major findings made by her are (a) having a regular income raises the elderly persons being the head of the family, to live with dignity

and (b) most of the elderly persons co-reside and care and support for them are provided mostly by the female members of the family.

Rajan (2006) based censuses (1971-2001) and NSSO (52nd round) presented demographic, ageing, socio-economic figures and some projections of India up to 2051. Health, health services data including morbidity for elderly persons in India have been presented. Most of the elderly persons in India being economically dependent, the cost of treatment is often a burden on their households. Appropriate insurance schemes are necessary for them to meet such expenses. Rajan (2007) again discussed about population aging, health and social security in India. In addition to the earlier discussion (2006), social assistance programmes for elderly persons have been discussed. He has added that the unorganized poor workers should organize themselves to be able to plan for their old age security.

With regard to population ageing in the world, Devi et al. (2008) pointed out almost the same thing as Dhar Chakraborti (2004). It is presented that there is an increasing trend in relative change in the economically active elderly persons in India from 1961-2020. Based on Indian census data, different indices of population ageing state wise have been presented (Kerala is having highest and Assam is having lowest per cent of elderly). The study made by Devi et al. (2008) was on Kerala mainly based on sample survey data. For the elderly persons in Kerala, based on census, per cent distribution of age and sex composition, work participation, non-workers by activity status, literacy rate, education level, main workers, economic characteristics (based on NSSO, 52nd round), and the number of beneficiaries of various pension schemes (Economic Review, 2004, Kerala) have been presented. Based on sample survey data on elderly persons in Kerala, per cent distribution of different characteristics of the elderly persons has been presented. In the study, logistic regression were employed to study influences of determinants (sex wise) of (a) health, (b) involvement in decision making, (c) involvement in household work. The main conclusion of the study is that possessing some asset, especially liquid asset, increases the chances of the elderly persons being made a part of household creating a feeling of belonging which is of greatest importance of the elderly persons.

Malakar et al. (2010) studied 'Evolving Marketing Strategies for Over Aged Persons'. Financial capacity of an individual influences own purchasing decision. Some qualitative parameters like tastes, preferences, culture etc formulate marketing strategies. Age composition of the customers is a significant parameter in marketing. In the process

of growing elderly, individuals undergo various changes; reduce variety roles which affect their lifestyle and consumption behaviors. Economic and demographic factors mainly focus on capital formation. Until 1980, companies focused on younger consumers, ignoring the elderly persons. Perception of elderly consumer market began around 1980. There was less reliable data for effective decision making in the present scenario, marketing decisions were made based on unreliable data and it was marked as 'trial-and-error-marketing'. Then in 1990 onwards, marketing provide special attention of elderly people. But the elderly persons are of heterogeneous groups, there are consumptions and preferences are heterogeneous. Again elderly persons buy generally for others. According to Malakar, all these are to be incorporated in marketing and production strategies.

Kabir et al. (2008) in their paper tried to identify problems facing by elderly people in Bangladesh from a micro study and suggested means through which elderly persons can continue to make active contribution to the economic, social and cultural life of their families and communities. Although ageing was not a major problem in Bangladesh, they expected that information on ageing in Bangladesh might provide a useful tool for formulating effective long term policy strategy to face the problem in the near future. They collected some suggestions and opinions for the welfare of the elderly populations which included financial benefits; recreational facilities; nursing home; health care facilities; nursing, social and community support.

Subba et al. (2010) assessed (a) the labour participation rates of the elderly workers and presented a diverse occupational pattern of the ageing workforce in India, with special reference to the informal/unorganized sector, (b) the dependency status of the elderly as well as the various social security policies meant for the elderly workers engaged in informal sector. According to an estimate made by NSSO in 61st round (2004-2005), 93.4 per cent of the total Indian workers are employed in the unorganized sector. A greater concentration of elderly workers is found in the informal sector. They presented some data from various secondary sources on (a) Indian and international labour force participation rates for elderly persons, (b) employment status, occupational structures, economically dependence and basic needs unmet of Indian elderly persons etc.

Misra (2010) in his paper compared ageing and social security measures in India and Japan. From secondary data for India, age structure of population: 1901-2020, trends in old age dependency by sex: 1901-2011, dependency burden on labour force: 1971-1991 have been provided. In Japan, social security systems are planned to guarantee a

minimum standard of living and to protect citizens from certain types of social and economic risk, expanded from occupation-based insurance to universal system to cover all citizens. The social security system in India is complex. The key problem with social security system in India are that budgetary support are not commensurate with the needs most come under welfare programmes, targeted, selective and conditional bereft of inefficiencies, biases discrimination, miss-targeting, adverse selection etc. According to Misra, the social security systems are to be universal to reduce the cost of administration and eliminate adverse selection.

Central Statistical Organization (CSO, 2011) mentioned that India, a developing country might pose mounting pressures on various socio-economic fronts including pension outlays, health care expenditures, fiscal discipline, savings levels etc. The elderly population faces multiple medical and psychological problems. There is an emerging need to pay greater attention to ageing-related issues and to promote holistic policies and programmes for dealing with the ageing society.

Prasad (2011) in his study has mentioned different aspects of human deprivation in the elderly age other than the measurement of income poverty, health and social aspects of deprivation and how it varied across space (sector and state) and gender. He has looked up on correlates and determinants of old age deprivation in India.

Bookman et al. (2011) has observed that present demographic shifts - delayed marriage and childbearing for young adults, decreased family size, and changes in family composition and structure - are complicating challenges to the family members and society. Increased longevity among elderly persons not only extends the years of care giving by their adult children but may require their grandchildren to become care givers as well. Married couples may have as many four elderly parents living; in fact, they may have more parents or relatives in need of care than they have living at home or on their own.

Khan (2011) has reviewed the policy interventions addressing the emerging ageing issues in the population and development dynamics context of a developing country in Bangladesh, a Muslim country. Although the per cent of elderly persons seemed not that high (6.6 per cent in 2007) and the number of the elderly persons are continuously increasing, some policy interventions from different levels are being executed and these are not adequate enough to address the issues. That review suggested

to take this population dynamics positively and initiate appropriate policies and its implementation for the betterment of this population as well as to integrate the issues in the mainstream development activities for a sustainable future of Bangladesh.

Kabir et al (2013) reported that in Bangladesh as in other regions of the world, the population aged 60 years and above was growing faster than the total population. Growth in the elderly population relative to other age groups challenged existing health services, family relationships and social security. According to Kabir, with continued population ageing, the loss of cognitive function would potentially cause enormous social and economic burden on families, communities and, to the country. The paper investigated that increasing longevity and declining fertility were combining to convert the population age structure from young to old. That combination was resulting implications on the family health care and unmet need of health care services in the public sector. The support index shown that there would be fewer persons to support elderly population in future with implications in traditional family care. The care index shown the cost of burden for long term care associated with the shift in the population age structure. As a consequence Bangladeshi societies would confront population aging without traditional kin support.

Dhar (2014) pointed out a decline in the workforce participation rate among the elderly persons, particularly among the urban and rural males. The decline in the workforce participation rate appears more as a deliberate withdrawal from the labour force, caused by rural prosperity and the expansion of employment opportunities in the manufacturing sector between 2004 and 2009, rather than due to forced unemployment. An examination of the occupational profile shows that in rural areas, the elderly workers are concentrated in the primary sector, whereas in urban areas, on the other hand, they are mainly engaged in services. An analysis of the occupational structure and earnings, however, reveals that the elderly persons who continue to work are generally employed in the low-wage sectors. Further, their own wages are lower than the (low) average earnings in these occupational categories. This remains an area of concern that needs to be addressed by policy-makers.

2.9 Identification of Research Gap

The shortcomings of the previous studies are (a) comparisons and conclusions were done through numbers and percentages, but not applying any statistical and econometric tools, (b) some of them are based on secondary data only; (c) again, most of them were covering only limited problem areas related to population ageing, covered only a limited section of the population. New form of research studies are needed which would (a) be based on primary data collected through field survey on sample population (elderly persons in West Bengal) and secondary data, (b) consider a considerable problem areas like ageing and its related problems, health and health care, social security and (c) apply various statistical and econometric tools for comparisons and conclusions etc.

The present study is unique because of the following reasons:

- (e) India's Muslims have the lowest living standard in the country on a per capita (NSSO Report No. 468 (55/10/6) (July 1999 – June 2000) Employment and Unemployment Situation Among Major Religious Groups in India). Very few studies have been done on population ageing of Muslim population in India, West Bengal and Malda district. Again, no study on comparison of population ageing between Muslims and non-Muslims has been done.
- (f) Scheduled Tribes (ST) and Scheduled Castes (SC) are weaker/backward section of society in India. Very few studies have been done on population ageing of ST population in India, West Bengal and Jalpaiguri district. Again, no study on comparison of population ageing between ST and non-ST populations has been done.
- (g) No study on population ageing among SC population has been done.
- (h) Very few studies have been done on Indian Constitutional provisions and legal protection, government programmes and policies for the welfare of elderly persons in India and West Bengal.

Knowledge gathered from the present study on this topic will be helpful for policy making. Considering the uniqueness of the study, our study will certainly contribute additional knowledge in the present topic.

CHAPTER 3

TRENDS AND PATTERN OF POPULATION AGEING IN INDIA AND WEST BENGAL AND AN OVERVIEW OF GLOBAL POPULATION AGEING

3.1 Introduction

The present chapter presents trends and pattern of population ageing in India and West Bengal along with an overview of global population ageing. It also presents population ageing and growth rates of population ageing district wise in West Bengal.

India is a vast and second largest populated country in the world (China is the top most populated country) with tremendous diversities in respect of language, religion, culture, caste and creeds etc. According to Census of India 2011, there were 35 states/union territories in India. Majority of Indians were of two major religions – Hinduism and Islam consisting of 79.8 and 14.2 per cent of population respectively. Some other religions were Christianity, Sikhism, Buddhism and Jainism consisting of 2.3, 1.7, 0.7 and 0.4 per cent of population respectively and others; 68.86 per cent of total populations lived in rural areas; shares of Scheduled Caste (SC) and Scheduled Tribe (ST) populations were 16.6 and 8.6 per cent respectively. West Bengal was one of the states of India having 70.5 per cent Hindus, 27.0 per cent Muslims population; 68.13 per cent population lived in rural areas; proportion of Scheduled Caste and Scheduled Tribe populations were 23.5 and 5.8 per cent respectively. Per cent of elderly varies widely from state to state, religion to religion, community to community etc. While comparing population ageing according to religions, two major religions - Hinduism and Muslim have been considered.

According to Census of India, 2011, the states like Kerala, Dadra and Nagar Haveli were with highest (12.55) and lowest (4.04) per cent of elderly persons respectively. Per cent of elderly persons of states/union territories having low population size were generally low. Shares of children and teenagers in India and all states/union territories were highest in Muslim populations among those in all classifications by locality of residence, religion, caste, sex and are approximately 50 per cent and more; per cent of elderly persons to total population and sex ratio for elderly persons were generally least among Muslims followed by Scheduled Tribes. There were remarkable differences

in life spans in populations of different religions and caste groups. Per cent of total population in India, West Bengal and its districts is provided in Table 3.1.

Table 3.1. Per cent of Total Population in West Bengal and its Districts

	Per cent of Total Population					
	Hindu	Muslim	Rural	Urban	SC	ST
India	79.8	14.2	68.9	31.1	16.6	8.6
West Bengal	70.5	27.0	68.1	31.9	23.5	5.8
Darjeeling	74.0	5.7	60.6	39.4	17.2	2.1
Jalpaiguri	81.5	11.5	72.6	27.4	37.7	18.9
CoochBehar	74.1	25.5	89.7	10.3	50.2	0.6
Dinajpur (N)	49.3	49.9	88.0	12.0	26.9	5.4
Dinajpur (S)	73.6	24.6	85.9	14.1	28.8	16.4
Malda	48.0	51.3	86.4	13.6	20.9	7.9
Murshidabad	33.2	66.3	80.3	19.7	12.6	1.3
Birbhum	62.3	37.1	87.2	12.8	29.5	6.9
Bardhaman	77.9	20.7	60.1	39.9	27.4	6.3
Nadia	72.2	26.8	72.2	27.8	29.9	2.7
24 Parganas (N)	73.5	25.8	42.7	57.3	21.7	2.6
Hugli	82.9	15.8	61.4	38.6	24.4	4.2
Bankura	84.3	8.1	91.7	8.3	32.7	10.3
Purulliya	81.0	7.8	87.3	12.7	19.4	18.5
Haora	72.9	26.2	36.6	63.4	14.8	0.3
Kolkata	76.5	20.6		100.0	5.4	0.2
24 Parganas (S)	63.2	35.6	74.4	25.6	30.2	1.2
Medinipur (W)	85.5	10.5	87.8	12.2	19.1	14.9
Medinipur (E)	85.2	14.6	88.4	11.6	14.6	0.5

Source: Census of India, 2011 (Percentages were computed by researcher)

3.2 Data and Methodology

The study of present chapter is totally based on secondary data relating to population and population ageing from (a) Census of India 1961 – 2011, (b) National Sample Survey Organization (NSSO) (60th Round, January – June 2004), (c) Sample Registration System (SRS) Office of the Registrar General, (d) an interactive database on the Profiles of Ageing 2017 (<https://population.un.org/ProfilesOfAgeing2017/index.html>) and (e) online and government sources. Data have been presented in figures and tables.

3.3 Population Ageing in India and its Trend

Elderly population (aged 60 years and above), per cent decadal growth rate of elderly persons in elderly population vis-à-vis that of general population and per cent of elderly persons and per cent distribution of population by broad age groups in India for the census years 1961 to 2011 are provided in the following tables. Age-sex wise distributions of population in India according to the census years 2001 and 2011 are also provided in the form of population pyramid (age-sex pyramid). The growth in elderly

persons is due to enhancement of longevity of life because of economic well-being, better medicines and healthcare and reduction in both mortality and fertility rates.

Elderly population (aged 60 years and above) in India for the census years 1961 – 2011 is provided in Table 3.2.

Table 3.2. Elderly Population (aged 60 years and above) (in millions) in India

Source	Total			Rural	Urban
	Person	Male	Female		
Census 1961	24.7	12.4	12.4	21.0	3.7
Census 1971	32.7	16.9	15.8	27.3	5.4
Census 1981	43.2	22.0	21.1	34.7	8.5
Census 1991	56.7	29.4	27.3	44.3	12.4
Census 2001	76.6	37.8	38.9	57.4	19.2
Census 2011	103.8	51.1	52.8	73.3	30.6

Source: Census Reports of India for various years

Per cent decadal growth rate of elderly in elderly population during the period x – y

$$= \frac{\text{No. of elderly in } y - \text{No. of elderly in } x}{\text{No. of elderly in } x} \times 100$$

Per cent decadal growth rate of elderly in general population during the period x – y

$$= \frac{\text{No. of elderly in } y - \text{No. of elderly in } x}{\text{Total no. of persons in } y - \text{Total no. of persons in } x} \times 100$$

Per cent decadal growth rate of elderly persons in elderly population depends on only growth of elderly over two periods, but per cent decadal growth rate of elderly persons in general population depends on both growths of elderly as well as total number of persons over two periods.

Per cent decadal growth rates of elderly persons in elderly and in general population during the periods 1951-61 to 2001-11 in India are provided in Table 3.3.

Table 3.3. Per Cent Decadal Growth Rate of Elderly in Elderly and in General Population in India

Period	In elderly population	In general population
1951 - 1961	23.9	21.6
1961 - 1971	33.7	24.8
1971 - 1981	33.0	24.7
1981 - 1991	29.7	23.9
1991 - 2001	25.2	21.5
2001 - 2011	35.5	17.7

Source: Census of India for various years

Above data (Table 3.3) indicate that growth of elderly persons in population has been happening at a faster rate than growth of total number of persons in population.

Per cents of elderly persons to total population according to sex, locality of residence, religion and caste in India for the census years 1961 to 2011 are provided in Table 3.4. Data revealed that there is an increasing trend in population ageing in India. It is observed that the difference of per cents of elderly persons to total population in rural and urban areas of India is narrowing because of reduction of disparities of population in rural and urban areas regarding social, economic, health care and other aspects.

Table 3.4. Per cent of Elderly in India

Source	Person	Male	Female	Rural	Urban
Census 1961	5.6	5.5	5.8	5.8	4.7
Census 1971	6.0	5.9	6.0	6.2	5.0
Census 1981	6.5	6.4	6.6	6.8	5.4
Census 1991	6.8	6.7	6.8	7.1	5.7
Census 2001	7.4	7.1	7.8	7.7	6.7
Census 2011	8.6	8.2	9.0	8.8	8.1

Source: Census Reports of India for various years

Per cents of elderly persons to total population in India according to Census of India, 2011 were 8.2 and 6.4 for Hindu and Muslim population respectively and those for Scheduled Castes (SC) and Scheduled Tribes (ST) population were 7.8 and 6.9 respectively. Hindu populations in most of states/union territories of India were mature. Per cent of elderly persons was lowest in case of Muslim population (Muslim populations in most of states/union territories of India were youthful), next lowest was in case of Scheduled Tribes population because of high fertility and low literacy rate. Reasons behind the variations of per cent of elderly persons to total population over state to state, religion to religion, localities of residence, communities, sex is the differences in the social and economic characteristics of population.

Per cent distribution of population by age groups and decadal growth rate (per cent) of total population in India for the census years 1961 – 2011 is provided in Table 3.5. In India, per cent of persons aged 0–14 years has been decreasing and that aged 60 years and above has been increasing, but that aged 15–59 (normal working age group) years has been fluctuating resulting in reduction of labour force. Decadal growth rate of total population in India has been gradually decreasing except 1961 – 1971.

Table 3.5. Per cent Distribution of Population by Age Groups and Decadal Growth Rate (Per Cent) of Total Population in India

Source	Age groups (years)				Decadal Growth Rate of Total Population (Per Cent)
	0 - 14	15 - 59	60 +	Total	
Census 1961	41.1	53.3	5.6	100	21.64
Census 1971	42.0	52.0	6.0	100	24.80
Census 1981	39.7	53.9	6.4	100	24.66
Census 1991	37.6	55.7	6.7	100	23.87
Census 2001	35.5	57.1	7.4	100	21.54
Census 2011	31.0	60.4	8.6	100	17.64

Source: Census Reports of India for various years

Per cent distribution of population by age groups in West Bengal for the census years 2001 and 2011 is provided in Table 3.6. In West Bengal, per cent of persons aged 0–14 years has been decreasing, but those for other age groups 15–59 and 60 years and above have been increasing. In West Bengal, rate of reduction of persons aged 0–14 years was higher than that in India. Per cent of persons aged 15–59 years in West Bengal was higher than that in India implying that position of workforce in West Bengal was better than that in India. Rate of growth of elderly persons in West Bengal over 2001–2011 was higher than that in India.

Table 3.6. Per cent Distribution of Population by Age Groups in West Bengal

Source	Age groups (years)			Total
	0 - 14	15 - 59	60 +	
Census 2001	33.3	59.6	7.1	100
Census 2011	27.2	64.3	8.5	100

Source: Census of India, 2001 and 2011 (Percentages were computed by researcher)

According to Census of India, 2011, sex ratios for elderly persons living in rural areas were in general higher than those for elderly persons living in urban areas. Most of the states/union territories in India had already achieved targeted replacement fertility rate of 2.1, even for some of them it became less than 2.1 (more than 50 per cent of states/union territories of India have total fertility rate (TFR) less than 2.1 and in case of more than 90 per cent of states/union territories of India, total fertility rates have fallen over the years 2013 to 2016), but the states like Uttar Pradesh and Bihar continued to lag behind with the rates 2.72 and 3.37 respectively in 2016. Those rates of India and West Bengal were 2.23 and 1.81 respectively in 2016 (respective figures in 2013 were 2.34 and 1.64) (Population Reference Bureau, 2017). Total Fertility Rate is the number of children born for 1000 females of child bearing period. This fact is one of the major determinants for increasing population ageing in India. Muslims are the fastest growing group in the religious mosaic of India. The data on population by religious communities of Census of India, 2011 showed that between 2001 and 2011, Hindu population grew by 16.76 per cent, while that of Muslim population by 24.6 per cent. The fertility rate is falling faster in Muslim population than in Hindu population. Data from the last three National Family Health Surveys (NHFS) showed that the gap between Muslim and Hindu fertility rates is narrowing (The Hindu, 2015). But the difference in fertility rates of these two communities is bigger in some states/union territories. Indian mortality rate was 7.35 in 2014, it was 6.23 in 2009. According to Census of India, 2011, crude death rates (CDR) (number of deaths per 1000 persons) of India and West Bengal locality of residence wise

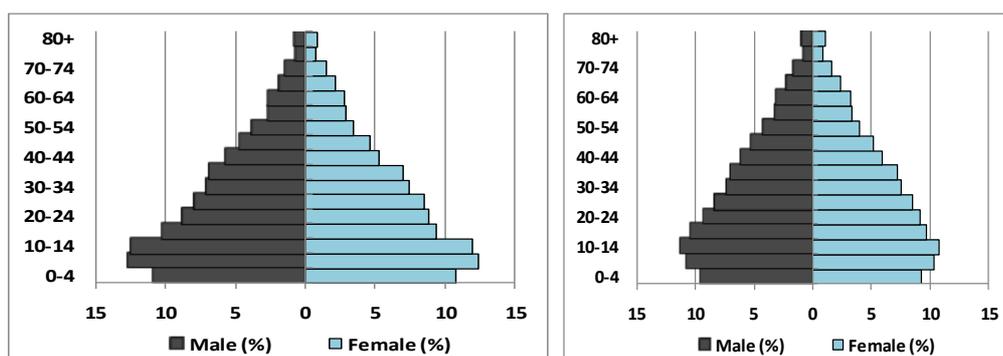
are provided in Table 3.7. Both total fertility rate and crude death rate of West Bengal are lesser than those of India.

Table 3.7. Crude Death Rates of India and West Bengal Locality of Residence wise (According to Census of India, 2011)

	Total	Rural	Urban
India	7.1	7.6	5.7
West Bengal	6.2	6.1	6.5

Source: Sample Registration System (SRS) Office of the Registrar General

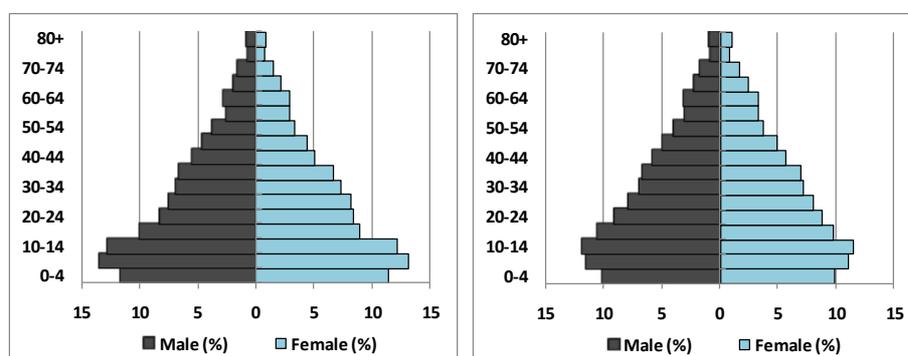
Age-sex distributions of total population in India are provided through the following population pyramids (Figures 3.1-3.3). The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an increase in the share of elderly population in the total population. Shapes of population pyramids in case of Hindu and Muslim populations are shrunken base and broad base respectively which indicates that the rate of ageing in Hindu population is more than that in Muslim population.



India (Total): 2001

India (Total): 2011

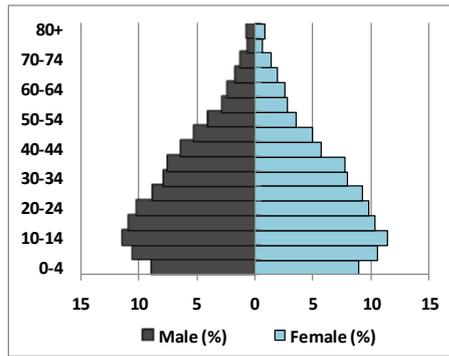
Figure 3.1: Population Pyramids for India (Total) for 2001 and 2011



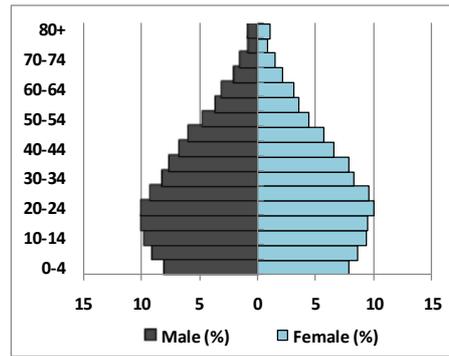
India (Rural): 2001

India (Rural): 2011

Figure 3.2: Population Pyramids for India (Rural) for 2001 and 2011



India (Urban): 2001

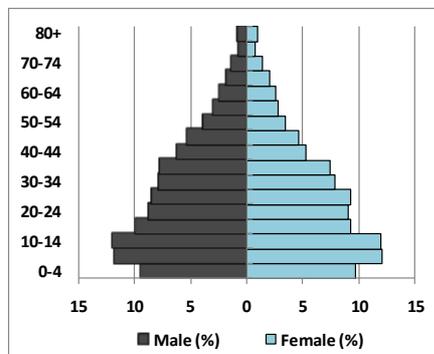


India (Urban): 2011

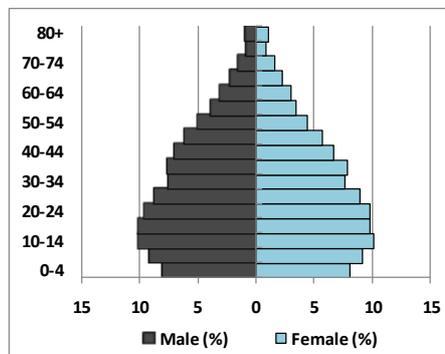
Figure 3.3: Population Pyramids for India (Urban) for 2001 and 2011

3.4 Population Ageing in West Bengal compared to India

Age-sex distributions of total population in West Bengal are provided through the following population pyramids (Figures 3.4 - 3.6).

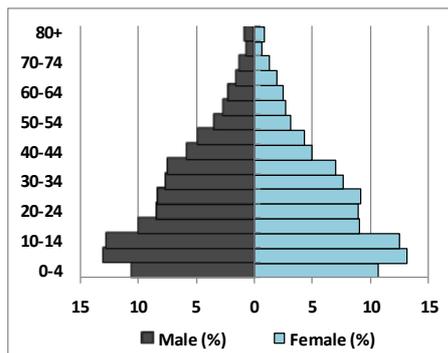


West Bengal (Total): 2001

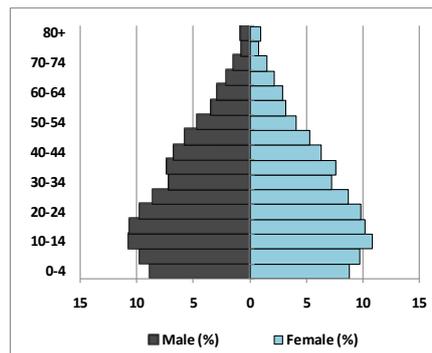


West Bengal (Total): 2011

Figure 3.4: Population Pyramids for West Bengal (Total) for 2001 and 2011

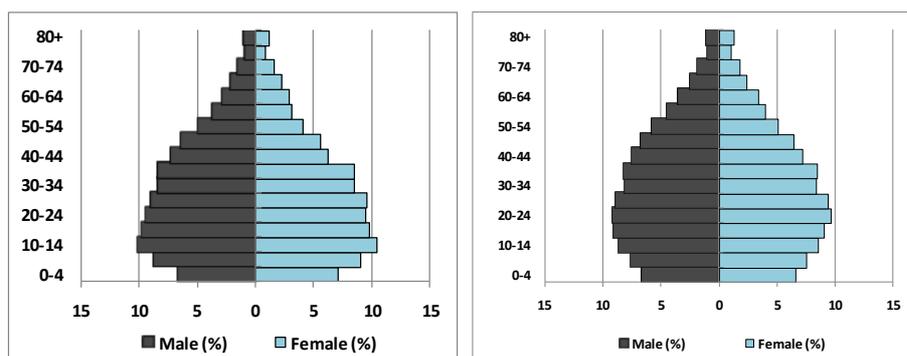


West Bengal (Rural): 2001



West Bengal (Rural): 2011

Figure 3.5: Population Pyramids for West Bengal (Rural) for 2001 and 2011



West Bengal (Urban): 2001

West Bengal (Urban): 2011

Figure 3.6: Population Pyramids for West Bengal (Urban) for 2001 and 2011

According to Census of India, 2011, (a) percentages of elderly persons in India and West Bengal were 8.6 and 8.5 respectively and their populations were mature, (b) the top most three states in India were Kerala, Goa and Tamil Nadu having per cent of elderly persons 12.6, 11.2 and 10.4 respectively and their populations were old, (c) the bottom most four states/union territories in India were Dadra & Nagar Haveli, Arunachal Pradesh, Daman & Diu and Meghalaya having per cent of elderly persons 4.0, 4.6, 4.7 and 4.7 respectively and their populations were youthful, (d) per cent of elderly among females was remarkably higher than that among males, (e) per cent of elderly persons among Muslims were remarkably least among all religious communities, (f) per cent of elderly persons in rural areas in most cases was remarkably higher than that in urban areas and (g) per cent of elderly persons among ST population was least than those among non-ST populations.

Per cent decadal growth rate of total population over 2001 to 2011 of India, Kerala and Meghalaya were 17.64, 4.86 and -0.47 respectively; Meghalaya and Kerala were having the first and second lowest figures respectively for said decadal growth rate.

In 2015, Human Development Index (HDI) of Kerala and West Bengal were 0.712 and 0.604 respectively. It is better to note that Kerala having highest (a) per cent of elderly persons to total population, (b) highest life expectancy at birth and age 60 for both rural and urban areas, (c) literacy rate, (d) sex ratio (Handbook of Statistics on Indian States, Reserve Bank of India 2015-16) and (e) HDI (https://en.wikipedia.org/wiki/List_of_Indian_states_and_territories_by_Human_Development_Index) among all the states and union territories of India. HDI of India in 2016 was 0.604.

Multidimensional Poverty Indices (MPI) and MPI poor in per cent of India and some states of India are provided in Table 3.8. Among the states/union territories of India, Bihar and Kerala were having highest and lowest MPI values.

Table 3.8. Multidimensional Poverty Indices (MPI) and MPI poor in per cent of India and some states of India

	MPI Value	MPI poor in per cent
India	0.283	53.7
Bihar	0.479	79.3
West Bengal	0.304	57.4
Kerala	0.051	12.7

Source: Oxford Poverty and Human Development Initiative (OPHI); MPI at a glance, Dec, 2011

Multidimensional Poverty Indices (MPI) and MPI poor in per cent across Hindu Castes and Tribes in India are provided in Table 3.9. In this respect, among the states/union territories of India, Bihar and Kerala were having highest and lowest MPI values.

Table 3.9. Multidimensional Poverty Indices (MPI) and MPI poor in per cent Across Hindu Castes and Tribes in India

	MPI Value	MPI poor in per cent
Scheduled Caste	0.361	65.8
Scheduled Tribe	0.482	81.4
Other Backward Class	0.305	58.3
General	0.157	33.2

Source: Oxford Poverty and Human Development Initiative (OPHI); MPI at a glance, Dec, 2011

West Bengal having 19 districts – classified into two sub-states namely North Bengal consisting of 6 districts and South Bengal consisting of 13 districts (according to Census of India, 2011). First 6 districts mentioned in Table 3.10 belong to North Bengal and the rests belong to South Bengal. Districts of North Bengal on an average are less developed, less industrialized etc as compared with those of South Bengal. Dinajpur (S) of North Bengal was having lowest population and 24 Parganas (N) of South Bengal was having highest population. Three districts of West Bengal, namely, Murshidabad, Malda and Dinajpur (N) were having top most Muslim-majority population with 66.3, 51.3 and 49.9 per cent Muslims respectively of total population; respective per cent of elderly were 7.0, 6.4 and 6.3 and respective per cent decadal growth rates of elderly in elderly population were 51.0, 47.6 and 50.7 which were top most three growth rates among those for districts of West Bengal. The per cent of elderly persons for the districts of West Bengal along with West Bengal and India are presented in Figure 3.7. Top most 5 districts with high per cent of elderly persons of West Bengal are Kolkata, 24 Parganas (N), Hugli, Nadia, Bankura - all of them belong to South Bengal while bottom most 5 districts with low per cent of elderly persons are Dinajpur (N), Malda, Jalpaiguri, Murshidabad, Birbhum. Dinajpur (N), Malda and Jalpaiguri belong to North Bengal and

the districts Murshidabad, Malda and Dinajpur (N) are having Muslim-majority population.

Table 3.10. Per cent of elderly of India, West Bengal and districts of West Bengal

	Person 2001	Person 2011	Per Cent Decadal growth of elderly in general population 2001-11	Per Cent Decadal growth of elderly in elderly population 2001-11	2011							
					Male	Female	Hindu person	Muslim person	Rural person	Urban person	SC person	ST person
India	7.4	8.6	14.9	35.5	8.2	9.0	8.9	6.4	8.8	8.1	7.8	6.9
West Bengal	7.1	8.5	18.4	35.8	8.2	8.8	9.4	6.1	7.9	9.8	7.6	7.0
District of West Bengal												
Darjeeling	6.6	7.7	14.9	33.4	7.9	7.4	7.7	4.5	7.4	8.1	6.4	7.6
Jalpaiguri	6.1	6.9	12.8	29.3	6.9	6.8	7.2	5.3	6.4	8.1	7.1	4.8
CoochBehar	6.9	7.7	13.4	26.6	7.5	7.9	8.1	6.3	7.4	10.0	7.5	6.9
Dinajpur (N)	5.1	6.3	11.2	50.7	6.3	6.3	7.2	5.4	6.1	7.5	6.8	6.0
Dinajpur (S)	6.4	8.0	21.6	38.7	7.8	8.2	8.6	6.3	7.5	10.9	7.5	7.3
Malda	5.2	6.4	11.8	47.6	6.2	6.6	7.2	5.6	6.3	6.9	6.9	6.3
Murshidabad	5.6	7.0	13.6	51.0	6.6	7.5	8.6	6.3	7.1	6.8	7.3	6.1
Birbhum	5.5	7.3	19.0	56.1	6.9	7.8	8.1	6.1	7.2	8.5	6.3	6.9
Bardhaman	6.5	8.1	21.6	39.7	7.7	8.5	8.6	6.5	8.1	8.2	6.5	5.7
Nadia	8.3	9.4	18.6	27.4	8.9	10.0	10.2	7.2	8.9	10.8	9.1	7.0
24 Parganas (N)	8.2	9.9	24.1	35.3	9.9	10.0	11.2	6.5	8.2	11.3	9.0	7.9
Hugli	8.0	9.8	29.3	34.8	9.6	10.1	10.4	7.1	9.0	11.1	7.5	6.4
Bankura	7.3	9.3	25.3	44.1	8.4	10.2	9.5	6.2	9.2	10.4	7.7	9.0
Purulliya	7.2	8.7	18.1	38.9	8.2	9.3	9.0	5.9	8.8	8.2	7.5	8.4
Haora	7.7	8.8	17.4	30.7	8.6	9.0	10.0	5.5	8.6	8.9	7.7	5.3
Kolkata	9.9	11.8	-100.3 ^a	16.9	11.7	11.8	13.3	6.1		11.8	7.7	7.2
24 Parganas (S)	6.8	7.9	13.7	36.7	7.7	8.1	9.2	5.5	7.6	8.7	8.3	7.4
Medinipur (W)	7.3	8.6	18.2 ^b	36.3	8.2	9.0	8.9	5.9	8.5	9.4	7.6	7.7
Medinipur (E)		8.7			8.6	8.8	9.1	6.1	8.8	7.8	8.0	6.0

Source: Census of India, 2001 & 2011(Percentages were computed by researcher)

^aFor district Kolkata like the state Nagaland, over 2001 to 2011, number of elderly persons increased, but number of total persons decreased, per cent decadal growth rates over 2001 – 2011 of Nagaland state and Kolkata district were -1.67 and -0.50 respectively

^bDistrict Medinipur was bifurcated into two districts Medinipur (E) and Medinipur (W) after census 2001

Top most three districts with respect to Scheduled Tribes populations were Jalpaiguri, Purulliya and Dinajpur (S) having 18.9, 18.5 and 16.4 per cent Scheduled Tribes populations respectively with respective per cent decadal growth rates of elderly persons in elderly population 29.3, 38.9 and 38.7 having very low Human Development Index (HDI) compared to India, West Bengal and most of the districts of West Bengal.

According to Census of India 2011, (a) per cent of elderly persons of Kolkata was 11.8 and Kolkata was the only one districts of West Bengal having old population and (b) there were three districts namely Jalpaiguri, Malda and Dinajpur (N) – all of them belonging to North Bengal having youthful populations with respective percentages of elderly 6.9, 6.4 and 6.3. Populations of some districts of South Bengal like 24 Parganas (N), Hugli and Nadia etc were youthful, but approaching towards becoming old.

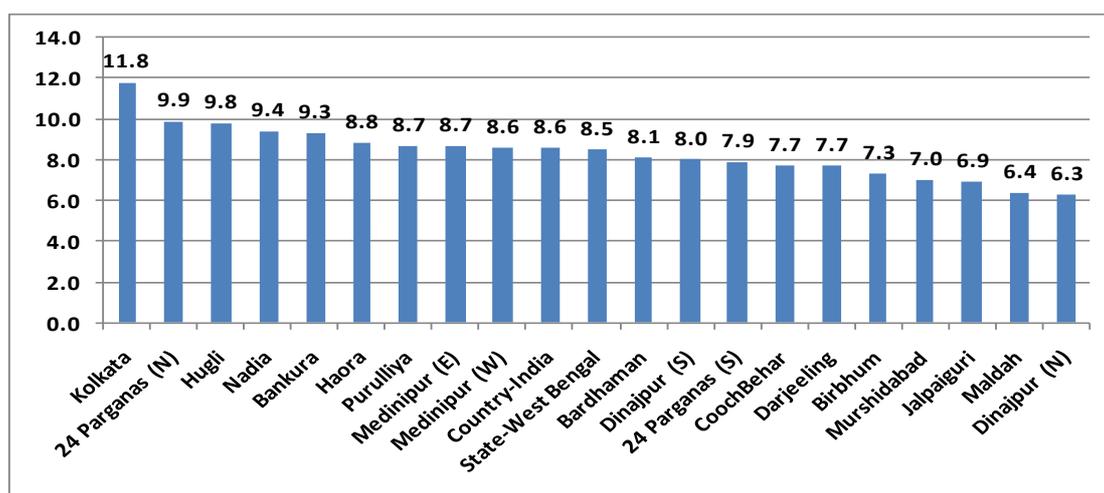


Figure 3.7: Per cent of Elderly for Districts of West Bengal along with West Bengal and India in 2011

In 2004, Human Development Indices (HDI) of Kolkata and Malda were highest (0.78) and lowest (0.44) respectively among the districts of West Bengal (www.wbplan.gov.in). All the three Muslim dominated districts had very low HDI compared to India, West Bengal and all other districts of West Bengal except Birbhim. It may be mentioned that per cents of elderly persons to total population of the districts of North Bengal were lower than those of India and West Bengal. All districts shown on higher side in respect of per cents of elderly persons of India and West Bengal in Figure 3.7 belong to South Bengal. According to Census of India 2011, among all districts of West Bengal, coefficients of correlation of per cent of elderly persons with per cent decadal growth rate of elderly persons in general population and HDI were -0.864 and 0.708 respectively, there were insignificant coefficients of correlation of per cent of elderly persons with total population and per cent decadal growth rate of elderly persons in elderly population. Regression equations of per cent of elderly persons to total population of districts of West Bengal with indicators like per cent decadal growth rate of elderly persons in general population and HDI have been developed to predict the amount of per cent of elderly persons in total population and are presented below. The regression

equation of per cent of elderly persons to total population of districts of West Bengal on per cent decadal growth rate of elderly persons in general population is as below:

$$\text{Per cent of elderly} = 11.476 - 0.223 * \text{per cent decadal growth rate of elderly in general population} \\ \text{S.E. (0.474) (0.032) (P-value <0.001) } R^2 = 0.746$$

The above regression equation of per cent of elderly persons to total population of districts of West Bengal on per cent decadal growth rate of elderly persons in general population explains 74.6 per cent of total variation of per cent of elderly persons of districts of West Bengal.

The regression equation of per cent of elderly persons of districts of West Bengal on HDI is as below:

$$\text{Per cent of elderly} = 2.348 + 10.455 * \text{HDI} \\ \text{S.E. (1.465) (2.532) (p-value <0.001) } R^2 = 0.500$$

The above regression equation of per cent of elderly persons to total population of districts of West Bengal on HDI explains 50.0 per cent of total variation of per cent of elderly persons to total population of districts of West Bengal. It may be inferred that population ageing is positively correlated with population size.

Sex ratio of elderly persons and general population in India and West Bengal is provided in Table 3.11. Generally sex ratios of elderly persons were higher than those of general population with some exceptions like in Darjeeling district.

Table 3.11. Sex Ratio of Elderly and General Population in India and West Bengal (figures outside and inside brackets provide sex ratios of elderly, general population respectively)

	Total	Hindu	Muslim	Rural	Urban	SC	ST
India	1033 (943)	1035 (939)	995 (951)	1036 (949)	1027 (929)	1043 (945)	1120 (990)
West Bengal	1010 (950)	1015 (948)	979 (951)	1048 (953)	949 (944)	1074 (951)	1130 (999)

Source: Census of India, 2011 (Sex Ratios were computed by researcher)

Sex ratios of elderly persons and of general population were very close in case of (a) Muslim population of both India and West Bengal and (b) urban population of West Bengal.

Per cent of elderly persons to total population, sex ratio among elderly persons according to locality of residence and age-group in India and West Bengal are provided in Table 3.12. Oldest-old group (aged 80 years and above) grew faster than the other elderly age groups, particularly among females both in rural and urban areas of India and West Bengal and having higher sex ratio than other elderly age groups. By 2025, India is

expected to reach 12.6 per cent of elderly persons in its total population (Source: shodhanga.inflibnet.ac.in).

Table 3.12. Per cent of Elderly, Sex Ratio among Elderly According to Locality of Residence and Age-group in India and West Bengal

	Age group (years)	Total				Rural				Urban			
		Percent of elderly				Percent of elderly				Percent of elderly			
		Person	Male	Female	Sex ratio	Person	Male	Female	Sex ratio	Person	Male	Female	Sex ratio
India	60-64	3.1	3.0	3.2	1014	3.2	3.0	3.3	1033	3.0	3.0	3.1	971
	65-69	2.2	2.1	2.3	1044	2.3	2.2	2.4	1054	2.0	1.9	2.1	1018
	70-74	1.6	1.6	1.6	990	1.7	1.6	1.7	979	1.4	1.4	1.5	1020
	75-79	0.8	0.7	0.8	1056	0.8	0.7	0.8	1050	0.8	0.7	0.8	1069
	80+	0.9	0.9	1.0	1137	1.0	0.9	1.0	1096	0.9	0.8	1.0	1236
	60+	8.6	8.2	9.0	1033	8.8	8.4	9.2	1036	8.1	7.7	8.5	1027
	All ages				943				949				929
West Bengal	60-64	3.0	3.0	3.0	952	2.8	2.8	2.9	981	3.4	3.5	3.4	903
	65-69	2.2	2.1	2.2	1000	2.1	2.0	2.2	1046	2.4	2.4	2.4	923
	70-74	1.5	1.5	1.6	1025	1.4	1.3	1.5	1080	1.8	1.8	1.8	937
	75-79	0.8	0.8	0.9	1054	0.7	0.7	0.8	1101	1.0	1.0	1.0	982
	80+	1.0	0.9	1.1	1173	0.9	0.8	1.0	1189	1.2	1.1	1.3	1150
	60+	8.5	8.2	8.8	1010	7.9	7.5	8.3	1048	9.8	9.8	9.8	949
	All ages				950				953				944

Source: Census of India 2011 (Per Cent of Elderly, Sex Ratio were computed by researcher)

Per cent distribution of households by the number of elderly members in India and West Bengal is provided in Table 3.13. More than 65 per cent of households in India and West Bengal did not have any elderly members. According to Census of India 2011, in West Bengal, per cent of households not having any elderly members in rural areas was higher than that in urban area, but the reverse was in case of national level. Nearly 22 and 8 per cent of households in India and West Bengal were having one and two elderly members respectively.

Table 3.13. Per cent Distribution of Households by Number of Elderly Members in India and West Bengal

No. of elderly members in household	India			West Bengal		
	Total	Rural	Urban	Total	Rural	Urban
None	68.7	67.5	71.2	69.6	71.2	66.2
1	21.6	22.1	20.5	23.3	22.4	25.3
2	9.3	9.9	7.9	6.8	6.2	7.9
3	0.3	0.4	0.3	0.2	0.2	0.5
4 or more	0.1	0.1	0.1	0.1	0.0	0.1

Source: Census of India, 2011 (Percentages were computed by researcher)

Reasons behind the majority of households not having any elderly members are (a) in some households, no family members were aged 60 years and above, (b) present

trend of households being towards nuclear family, (c) elderly members like to reside separately from their sons, daughters to stay with dignity and independently, to avoid accommodation problem and/or adjustment problems with other family members and (d) economic conditions of elderly persons have been improving over times etc (Jadav et al, 2011).

Life expectancy is one of major indicators for increasing population ageing. Life expectancy in India has been increasing in rural and urban areas. At birth, in rural areas, it has increased from 48 years in 1970-75 to 67.1 years in 2011-15; while in urban areas, it has increased from 58.9 years to 71.9 years. Kerala has got the highest life expectancy at birth followed by Maharashtra and Punjab. The life expectancies at birth in Kerala were 72.2 years and 78.2 years for males and females respectively; those at age 60 years in Kerala were 18.2 years and 22.1 years for males and females respectively as per the SRS Report 2011-15. Life expectancy at birth and at 60 years in the period 2011-15 in India and West Bengal are provided in Table 3.14. Life expectancies at birth and at the age 60 years were higher among females than males in India and West Bengal.

Table 3.14. Life Expectancy at Birth and at 60 Years in Period 2011-15 in India and West Bengal

	At age (years)	Total	Male	Female
India	0	68.3	66.9	70.0
	60	18.0	17.1	18.9
West Bengal	0	70.5	69.4	71.8
	60	17.9	17.3	18.7

Source: Sample Registration System (SRS) Office of the Registrar General

Death rate (mortality rate) is one of the major determinants for population ageing. Age-specific death rate per 1000 of elderly persons according to sex and locality of residence in India and West Bengal is provided in Table 3.15. For 2015 in India, the age-specific death rate per 1000 population for age-group 60-64 years was 23.7 for rural areas and 13.6 for urban areas. Altogether it was 20.3 for the age-group 60-64 years in whole India. As regards to sex, in India, those were 22.0 for males and 18.4 for females. Age-specific death rates were higher among elderly males than elderly females in India.

Table 3.15. Age-specific Death Rate per 1000 of Elderly in India and West Bengal (Sex and Location Specific)

	Age-group (years)					
	60-64	65-69	70-74	75-79	80-84	85 +
India (Total)	20.3	28.6	41.1	65.2	116.2	209.5
India (Male)	22.0	31.0	44.7	69.8	123.5	238.1
India (Female)	18.4	26.1	37.6	60.8	109.4	186.9
India (Rural)	23.7	31.1	43.4	65.3	119.7	203.6
India (Urban)	13.6	23.4	36.1	64.8	109.1	222.9
West Bengal (Total)	18.9	26.3	41.8	66.8	108.7	166.1

Source: Sample Registration System (SRS) Office of the Registrar General

Again, age-specific death rates were lower among elderly persons of urban areas than those of rural areas because elderly persons of urban areas are generally more educated, wealthy and active in workforce and other activities than elderly persons of rural areas.

Some of the economic indicators for the elderly persons are old-age dependency ratio, headship of household, state of economic independence, economically dependence, economically independence by number of dependents, working status etc. The old-age dependency ratio has an increasing trend and the ratio has increased from 10.9 per cent in 1961 to 14.2 per cent in 2011. The gap between female and male old-age dependency ratio also has an increasing trend and those two ratios were 14.9 and 13.6 respectively in 2011. There has been considerable gap in all the period of that ratio for rural and urban areas, because of a relatively higher concentration of working age population in urban areas. The ratios were 15.1 and 12.4 for rural and urban areas respectively.

According to census of India, 2011, among the major states, the overall old-age dependency ratio (per cent) varied from 10.4 per cent in Delhi to 19.6 per cent in Kerala. The old-age dependency ratio of 2011 in India and West Bengal by sex and locality of residence is provided in Table 3.16. Old-age dependency ratio has been increasing both in India and West Bengal. These are higher in cases of females compared to males and in rural areas compared to urban areas. In West Bengal, old age dependency ratios were higher in urban areas than those in rural areas in both the census years 2001 and 2011.

Table 3.16. Old-Age Dependency Ratio (per cent) by Sex and Locality of Residence in India West Bengal

Year	All	Male	Female	Rural	Urban
India					
1961	10.9	10.9	10.9	11.4	8.7
1971	11.5	11.4	11.6	12.2	8.9
1981	12.0	11.8	12.2	13.0	9.2
1991	12.2	12.2	12.2	13.2	9.7
2001	13.1	12.5	13.8	14.1	10.8
2011	14.2	13.6	14.9	15.1	12.4
West Bengal					
2001	11.9	11.1	12.8	11.5	12.9
2011	13.2	12.7	13.7	12.5	14.5

Source: Office of the Registrar General, India

Per cent distribution of households having elderly head by locality of residence and sex in India and West Bengal according to census 2011 is provided in Table 3.17.

Table 3.17. Per cent Distribution of Households Having Elderly Head by Locality of Residence and Sex in India and West Bengal

	Locality of residence	Sex of elderly head		
		Person	Male	Female
India	Total	22.4	19.9	38.4
	Rural	23.0	20.7	38.8
	Urban	21.1	18.4	37.7
West Bengal	Total	21.5	18.7	40.5
	Rural	19.3	16.9	38.0
	Urban	26.2	22.7	44.1

Source: Census of India, 2011 (Percentages were computed by researcher)

Since elderly females are expected to live more years than elderly males, per cent of elderly female heads is almost twice of that of elderly male heads, per cent of elderly female head in West Bengal was more than that of India. Nearly 20 per cent of households in India and West Bengal were having elderly heads.

National Sample Survey Organisation (NSSO) in 2004 mentioned that 65 per cent of the elderly persons in India had to depend on others for their day-to-day maintenance. About 86 and 83 per cent of elderly persons in rural and urban areas were dependent on others either partially or fully. The elderly males were much better off as majority of them (51 and 56 per cent of them in rural and urban areas respectively) did not depend on others for their livelihood. State-wise data on economic independence of elderly persons mentioned that in rural areas, the per cent of elderly males who were fully dependent on others was highest in Kerala (43) and was lowest in Jammu and Kashmir (21) whereas for females the figure was highest in Assam (81) and lowest in Haryana (44). In urban areas, highest per cent of fully dependent elderly males was 38 in Bihar and lowest was 20 in Himachal Pradesh. The elderly female in urban areas with highest per cent of fully dependent elderly was 83 in Jammu and Kashmir and lowest was 50 in Haryana. Per cent distribution of elderly persons by their state of economic independence in India and West Bengal is provided in Table 3.18. According to NSSO, 60th Round, (January–June 2004), per cent of elderly persons not dependent on others were (a) higher in urban areas than that in rural areas and (b) remarkably higher among elderly males than that of elderly females, reasons behind the statement are elderly persons of urban areas and/or elderly males are more likely to remain in workforce and/or are economically well-being than others.

Table 3.18. Per cent Distribution of Elderly by State of Economic Independence in India and West Bengal

		Male			Female		
		Not dependent on others	Partially dependent on others	Fully dependent on others	Not dependent on others	Partially dependent on others	Fully dependent on others
India	Rural	51	15	32	14	12	72
	Urban	56	13	30	17	10	72
West Bengal	Rural	46	18	33	6	8	82
	Urban	66	10	23	18	8	72

Source: NSSO, 60th Round, (January – June 2004)

Per cent distribution of economically dependent elderly persons by category of persons supporting the elderly persons in India is provided in Table 3.19. In all cases, about 70–85 per cent of dependent elderly persons were supported by their own children; 2–3 per cent by grandchildren; about 6 per cent by others. In case of supporting by spouse, 16–19 per cent elderly females were supported by their male spouse, whereas 6–7 per cent of elderly males are supported by their female spouse.

Table 3.19. Per cent Distribution of Economically Dependent Elderly by Category of Persons Supporting Elderly in India

		Category of persons supporting			
		Spouse	Own children	Grandchildren	Others
Rural	Person	13	78	3	6
	Male	7	85	2	6
	Female	16	75	3	6
Urban	Person	15	76	3	6
	Male	6	87	2	6
	Female	19	71	3	7

Source: NSSO, 60th Round, (January – June 2004)

In India, of the economically independent elderly men, more than 90 per cent reported to be living with one or more dependents, while among economically independent elderly women, about 65 per cent were having one or more dependents. Elderly females were having lesser number of dependents than elderly males in both rural and urban areas. Per cent distribution of economically independent elderly persons by number of dependents in India is provided in Table 3.20.

Table 3.20. Per cent Distribution of Economically Independent Elderly by Number of Dependents in India

		Number of dependents					Total
		0 (Nil)	1	2	3 to 5	6 or more	
Rural	Person	12	29	26	22	11	100
	Male	7	32	23	25	13	100
	Female	32	18	37	10	4	100
Urban	Person	15	34	30	18	5	100
	Male	8	40	26	21	6	100
	Female	34	15	42	8	2	100

Source: NSSO, 60th Round, (January – June 2004)

Alam and Yadav (2014) in their study pointed out that most surveys conducted in India and elsewhere deliberately avoided gathering information on personal income. They conducted a survey (the United Nations Population Fund (UNFPA, India, 2014) along with the Institute of Economic Growth (Delhi), Institute of Social and Economic Change (Bangalore) and Tata Institute of Social Sciences (Mumbai) in a major research project to study ageing issues in India, including socio-economic and health conditions of the elderly persons, in the states of Odisha, West Bengal, Maharashtra, Himachal Pradesh,

Punjab, Tamil Nadu and Kerala which revealed that 74 per cent of elderly males and about 41 per cent of elderly females reported receiving some personal income and about 43 per cent of all elderly persons receiving no income.

Per cent of elderly persons working in India and West Bengal according to Census of India 2011 is provided in Table 3.21. As per Census of India 2011, 66.4 per cent of elderly males, 28.4 per cent of elderly females in rural area engaged in economic activity in the capacity of main or marginal worker (occasional worker). In urban areas in India, it was only 46.1 per cent of elderly males and 11.3 per cent of elderly females engaged in economic activity; corresponding figures in Kerala were 42.0 and 10.1. The proportions increased in 2011 for both elderly males and women as compared to Census of India 2001 in both rural and urban areas. But the proportions increased from census 2001 to 2011 in case of elderly women were relatively higher than the proportions increased from census 2001 to 2011 in case of elderly males because of increase in females' intention to involve in workforce and be self-dependent.

Table 3.21. Per cent of Elderly Working in India and West Bengal

	Age-group (years)	Main worker			Marginal worker			Main worker + Marginal worker			
		Person	Male	Female	Person	Male	Female	Person	Male	Female	
India	Total	60 – 69	37.3	57.6	17.3	11.8	12.2	11.6	49.1	69.8	28.9
		70 – 79	24.3	39.3	9.5	8.1	9.7	6.5	32.4	49.0	16.0
		80 +	16.4	27.7	6.5	5.7	7.2	4.4	22.1	34.9	10.9
		60 +	31.4	49.4	14.0	10.2	11.0	9.4	41.6	60.4	23.4
	Rural	60 – 69	40.5	61.6	20.2	15.0	15.1	14.9	55.5	76.7	35.1
		70 – 79	27.0	43.0	11.1	10.1	11.8	8.3	37.1	54.8	19.4
		80 +	17.4	28.5	7.3	7.0	8.6	5.5	24.4	37.1	12.8
		60 +	34.3	53.0	16.3	12.8	13.4	12.1	47.1	66.4	28.4
	Urban	60 – 69	29.2	48.1	10.2	4.6	5.6	3.5	33.8	53.7	13.7
		70 – 79	17.7	30.1	5.7	3.3	4.3	2.3	21.0	34.4	8.0
		80 +	14.0	25.6	4.7	2.9	3.9	2.0	16.9	29.5	6.7
		60 +	24.4	41.0	8.3	4.1	5.1	3.0	28.5	46.1	11.3
West Bengal	Total	60 – 69	29.6	50.9	7.6	8.8	10.8	6.8	38.4	61.7	14.4
		70 – 79	16.5	29.5	3.9	5.1	7.1	3.2	21.6	36.6	4.1
		80 +	13.1	24.1	3.7	4.2	5.5	3.0	17.3	29.6	6.7
		60 +	24.1	42.2	6.1	7.2	9.3	5.3	31.3	51.5	11.4
	Rural	60 – 69	31.1	55.0	7.3	11.6	14.6	8.8	42.7	69.6	16.1
		70 – 79	17.7	32.9	3.7	6.5	9.5	3.8	24.2	42.4	7.5
		80 +	12.7	24.0	3.2	5.1	6.9	3.6	17.6	30.9	6.8
		60 +	25.4	45.9	5.8	9.6	12.4	6.9	35.0	58.3	12.7
	Urban	60 – 69	26.9	43.9	8.2	3.7	4.5	3.0	30.6	48.4	11.2
		70 – 79	14.6	24.3	4.4	2.6	3.2	1.9	17.2	27.5	6.3
		80 +	13.6	24.2	4.4	2.8	3.4	2.2	16.4	27.6	6.6
		60 +	21.8	36.3	6.6	3.3	4.0	2.6	25.1	40.3	9.2

Source: Census of India, 2011 (Percentages were computed by researcher)

Proportions of elderly persons engaged as main workers increased from census 2001 to 2011, but proportions of elderly males in rural areas decreased from census 2001

to 2011. Proportion of elderly non-workers in urban areas was remarkably higher than that in rural areas. A remarkable proportion of elderly persons at the age 60 years, even at the age 80 years remained in working condition. The increase of elderly persons remained in working condition is one of the determinants for increasing population ageing, enhancing social security and well-being of elderly persons in India and West Bengal.

Health and social status of elderly persons in India and West Bengal are presented in the subsequent Tables (Tables 3.22 – 3.27). Literacy levels among elderly persons of (a) rural and urban areas, (b) males and females have improved tremendously over 2001 to 2011. There were huge gaps of literacy rates of elderly persons between (a) rural and urban areas and (b) males and females. Literacy rates for elderly persons in West Bengal were better than those in India. Per cent of literacy among elderly persons in India and West Bengal for the Censuses of India 2001 and 2011 is provided in Table 3.22. The increase of literacy among elderly persons is another determinant for increasing population ageing, enhancing social security and well-being of the elderly persons in India and West Bengal.

Table 3.22. Per cent of Literacy among Elderly in India and West Bengal for Censuses 2001 and 2011

	Census	Total			Rural			Urban		
		Person	Male	Female	Person	Male	Female	Person	Male	Female
India	2001	36.3	52.8	20.3	29.0	45.5	13.0	58.1	75.0	41.8
	2011	43.5	59.1	28.5	34.2	50.5	18.4	66.0	79.6	52.7
	Per cent Decadal growth	63.9	76.9	51.4	52.8	69.2	37.6	79.2	87.3	71.3
West Bengal	2001	48.8	68.8	29.7	38.5	61.2	17.9	69.3	82.8	55.2
	2011	53.5	70.0	37.1	42.2	61.5	23.7	72.9	83.9	61.2
	Per cent Decadal growth	66.6	73.3	59.2	55.0	62.4	46.6	79.8	86.1	73.2

Source: Census of India, 2001 and 2011 (Percentages were computed by researcher)

According to Census of India 2011, per cents of literacy among elderly persons were least in Arunachal Pradesh (19.4, 28.3 and 9.6 for persons, males and females respectively), maximum in Mizoram (84.1, 90.0 and 78.1 for persons, males and females respectively) followed by Kerala (79.2, 88.4 and 71.8 for persons, males and females respectively).

Per cent distribution of elderly persons with illness or otherwise by their perception about current state of health in India and West Bengal is provided in Table 3.23. It is observed that despite illness higher proportion of elderly men seemed to be feeling better health condition than elderly women. More elderly men and women in urban areas felt to have good/fair health as compared to elderly in rural areas.

Table 3.23. Per cent of Elderly with Illness or Otherwise by Their Perception about Current State of Health in India and West Bengal

		Elderly with illness own perception about current state of health			Elderly without illness own perception about current state of health		
		Excellent	Good/ fair	Poor	Excellent	Good/ fair	Poor
India	Male	2	59	37	8	73	13
	Female	2	54	42	5	74	17
West Bengal	Male	3	49	47	8	64	17
	Female	1	48	47	2	60	27

Source: NSSO, 60th Round, (January – June 2004)

Perception of having good or excellent health irrespective of elderly persons with illness or without illness is one of the determinants of life satisfaction leading to increase population ageing; social security and well-being of the elderly persons.

Per cent distribution of elderly persons by state of physical mobility in India is provided in Table 3.24. In both rural and urban areas, elderly men were more mobile than elderly women. About 90 per cent of elderly persons were still mobile; it is a good indicator for the well-being of the elderly persons and an increase of population ageing.

Table 3.24. Per cent Distribution of Elderly by State of Physically Mobility in India

	Male			Female		
	Mobile	Confined to bed	Confined to home	Mobile	Confined to bed	Confined to home
Rural	91.2	1.2	5.5	89.1	1.4	7.4
Urban	91.7	1.7	5.1	88.5	1.7	8.3

Source: NSSO, 60th Round, (January – June 2004)

According to Census of India 2011, distribution of number of disabled persons per 1000 elderly persons in India and West Bengal is provided in Table 3.25. Prevalence of disabilities among elderly persons was higher in rural areas than that in urban areas. Census of India, 2011 pointed out that locomotion and visual disability were the most prevalent disabilities among elderly persons in rural and urban areas of India and West Bengal.

Table 3.25. Distribution of Number of Disabled Persons per 1000 Elderly in India and West Bengal

		Disability type								
		Total disabilities	In seeing	In hearing	In speech	In movement	Mental retardation	Mental illness	Any other	Multiple disabilities
India	Total	52	13	10	2	13	1	1	6	6
	Rural	73	19	14	3	19	1	1	8	9
	Urban	42	9	8	2	10	1	1	6	4
West Bengal	Total	47	13	8	2	10	1	1	6	7
	Rural	52	15	9	1	11	1	1	6	8
	Urban	39	10	7	2	8	1	1	6	4

Source: Census of India, 2011 (Numbers were computed by researcher)

Census of India, 2011 pointed out that per cent of currently married elderly women was lower than the per cent of currently married elderly men. After age of 70 years, more than 60 per cent of women became widows. According to Census India 2011, per cent distribution of marital status of elderly persons in India and West Bengal is provided in Table 3.26. More than 80 per cent of elderly males, but less than 50 per cent of elderly females were currently married. Situation of elderly persons regarding their marital status were almost same in rural and urban areas of India and West Bengal.

Table 3.26. Per cent Distribution of Marital Status of Elderly in India and West Bengal

		Never married		Currently married		Widowed		Separated		Divorced	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
India	Total	2.9	2.0	82.1	49.6	14.6	47.8	0.3	0.4	0.2	0.2
	Rural	2.7	1.7	81.5	50.4	15.4	47.4	0.3	0.4	0.1	0.1
	Urban	3.3	2.9	83.6	47.7	12.7	48.8	0.3	0.5	0.2	0.2
West Bengal	Total	3.1	2.2	85.7	39.9	10.8	57.2	0.4	0.5	0.2	0.2
	Rural	2.2	1.5	86.5	38.7	10.9	59.0	0.4	0.5	0.2	0.2
	Urban	4.6	3.3	84.3	42.1	10.6	54.0	0.4	0.4	0.2	0.2

Source: Census of India, 2011 (Percentages were computed by researcher)

Living arrangement of elderly persons is very important indicator of social status and well-being of the elderly persons. More than 56 per cent of elderly persons lived with their spouse and 32 per cent of elderly persons live with their children. About 80 per cent of elderly persons were living (a) with spouse and other family members or (b) with their children. This is a good indicator of enhanced social security and well-being of the elderly persons in India and West Bengal. 5 per cent of elderly persons lived alone and 4 per cent live with other relations and non-relations. Per cent distribution of elderly persons by their living arrangements in India and West Bengal is provided in Table 3.27.

Table 3.27. Per cent Distribution of Elderly by Their Living Arrangements in India and West Bengal

	Type of living arrangement				
	Alone	With spouse only	With spouse and other members	With children	With other relations and non-relations
India	5.2	12.0	44.8	32.1	4.4
West Bengal	3.4	7.8	44.4	35.6	5.7

Source: NSSO, 60th Round, (January – June 2004)

3.5 An Overview of Global Population Ageing

In the area of population ageing, the Population Division, Department of Economic and Social Affairs, United Nations Secretariat prepares national, regional and global estimates and projections of elderly populations, monitors levels and trends in population ageing and collects and analyses information on the relationship between population ageing and development. This report is accompanied by an interactive database on the Profiles of Ageing 2017 (<https://population.un.org/ProfilesOfAgeing2017/index.html>). Following tables provides information relating to population ageing of the world, development groups, regions, income groups and two particular countries Japan and India. Japan is the

country having highest per cent of elderly persons to the total population in the world. Per cent of elderly (2017 estimate); average annual change of elderly over 2010-2015; median age (years) (2015 estimate), life expectancy at birth and aged 60 years of the world (during 2010-2015) in the world, development groups, regions, income groups, Japan and India is provided in Table 3.28. It is evidence that oldest-old group (aged 80 years and above) grew faster than the other elderly age groups throughout the world. Per cent of elderly persons positively relates to development and economic condition of the countries. Per cent of elderly persons to total population, life expectancy and median age are higher in developed regions and high-income countries than those in less developed regions and low-income countries.

Table 3.28. Per cent of Elderly (2017 estimate); Average Annual Change of Per cent of Elderly over 2010-2015; Median Age (years) 2015 estimate, Life Expectancy at Birth and Aged 60 Years (During 2010-2015) of world, development groups, regions, income groups, Japan and India (M-Male, F-Female)

	Per cent of elderly at ages			Average annual change of Per cent of elderly over 2010-2015 at ages			Median age (years)	Life expectancy (years) (during 2010-2015) at			
	60+	65+	80+	60+	65+	80+		birth		aged 60 years	
								M	F	M	F
World	12.7	8.7	1.8	3.3	2.8	3.3	29.6	68.6	73.1	18.8	21.6
Development Groups											
More developed regions	24.6	18.3	5.0	2.0	2.3	3.6	41.1	75.2	81.2	20.9	24.7
Less developed regions	10.4	6.8	1.2	3.9	3.2	4.3	27.8	67.2	71.2	17.9	20.1
Least developed countries	5.5	3.6	0.5	3.0	3.0	4.4	19.6	61.1	64.3	16.7	18.0
Other less developed countries	11.3	7.4	1.3	4.0	3.2	4.3	29.3	68.6	72.5	18.0	20.3
Regions											
Africa	5.5	3.5	0.5	3.1	2.9	3.8	19.4	58.6	61.9	16.0	17.5
Asia	12.2	8.1	1.5	3.8	3.1	4.3	30.3	69.9	73.8	18.2	20.7
Europe	24.7	18.2	5.0	1.7	1.6	2.3	41.6	73.7	80.7	19.9	23.9
Latin America and the Caribbean	11.8	8.1	1.8	3.8	3.5	4.3	29.2	71.4	77.9	20.1	23.4
Northern American	21.7	15.6	3.9	3.0	3.2	1.3	37.9	76.8	81.5	21.9	24.9
Oceania	17.0	12.3	3.0	3.0	3.6	2.4	32.8	75.7	80.2	22.3	25.4
Income Groups											
High-income countries	23.6	17.7	4.8	2.2	2.6	2.6	40.4	77.7	83.1	21.9	25.8
Upper-middle-income countries	14.7	9.8	1.9	4.1	3.1	4.0	33.9	72.0	76.8	18.5	21.3
Lower-middle-income countries	8.5	5.4	0.9	3.4	2.7	3.6	25.2	64.7	68.5	16.7	18.7
Low-income countries	5.1	3.4	0.5	2.8	3.1	4.2	18.3	58.9	62.3	16.0	17.7
Two selected countries											
Japan	33.4	27.0	8.1	1.5	2.8	3.9	46.3	80.0	86.4	23.0	28.4
India	9.4	6.0	0.9	3.9	3.2	4.7	26.7	66.2	69.1	17.0	18.5

Source: Profiles of Ageing 2017, Population Division, Department of Economic and Social Affairs, United Nations

The average annual change of per cent of elderly persons is higher in less developed regions and low-income countries than those in developed regions and high-income countries. Per cent of elderly persons and life expectancy are highly positively correlated. Japan is in top position with respect to per cent of elderly persons and life expectancy in the world.

Old age dependency ratio and household living arrangement of elderly persons (in per cent) during 2010-2015 in the world, development groups, regions, income groups, Japan and India is provided in Table 3.29. Old age dependency ratio is higher in developed regions and high-income countries than that in less developed regions and low-income countries. Similarly, living alone or with spouse only is higher in developed regions and high-income countries than that in less developed regions and low-income countries.

Table 3.29. Old Age Dependency Ratio (per cent) and Household Living Arrangement (in per cent) of Elderly During 2010-2015 of world, development groups, regions, income groups, Japan and India

	Old Age Dependency Ratio (%)	Household Living Arrangement of Elderly (in per cent)			
		Alone	With Spouse only	With Children	Others
World	14.4	13	27	50	10
Development Groups					
More developed regions	29.1	27	47	20	6
Less developed regions	11.2	8	19	62	11
Least developed countries	7.8	5	9	69	17
Other less developed countries	11.7	8	20	62	10
Regions					
Africa	7.6	10	11	60	20
Asia	12.6	7	20	64	9
Europe	28.6	28	47	21	4
Latin America & the Caribbean	13.1	13	20	52	15
Northern American	24.8	25	47	19	9
Oceania	20.9	NA	NA	NA	NA
Income Groups					
High-income countries	28.2	27	48	19	6
Upper-middle-income countries	14.2	10	24	56	10
Lower-middle-income countries	9.6	7	15	68	10
Low-income countries	7.8	7	8	63	22
Two selected countries					
Japan	46.2	16	36	NA	NA
India	10.0	5	15	71	9

Source: Profiles of Ageing 2017, Population Division, Department of Economic and Social Affairs, United Nations

NA: Not available

Here old age dependency ratio (dependents per 100 non-dependent)

$$= 100 * \frac{\text{Number of persons aged 65 years and above}}{\text{Number of persons between ages 20 to 64 years}}$$

Some highlighted figures on global ageing are provided below:

- Two thirds of the world's elderly persons live in the developing regions and their numbers are growing faster than in the developed regions.
- Females tend to live longer than men, on average, and comprise a majority of elderly persons, especially at advanced ages. The sex balance of the elderly population is projected to remain relatively unchanged at the global level in the coming decades.
- The elderly population is itself ageing, with an increasing share aged 80 years or over. The elderly population is growing faster in urban areas than in rural areas.
- High-income countries tend to be the most elderly.
- The global total dependency ratio has fallen to an historical minimum and is set to rise in the coming decades.
- All regions have experienced substantial increases in life expectancy since 1950.
- Elderly persons' living arrangements are strongly related with countries' income levels. Elderly persons have become more likely to live independently, as co-residence with children has become less common. Elderly females are more likely than elderly males to live alone.

3.6 Summary

In the present chapter, we have studied population ageing, its trend and related issues like sex ratio; per cent households having elderly members; life expectancy of elderly at birth and at age 60 years; age-specific death rates of elderly persons; economic status of elderly persons including old-age dependency, per cent of elderly persons by state of economic independence, economic dependence, per cent of workers; health and social status of elderly persons including literacy rate, perception of health, physical mobility, disabilities, marital status and living arrangement in India and West Bengal through secondary data mostly from Censuses of India, Sample Registration System (SRS) Office of the Registrar General and NSSO and Profile Ageing 2017 (world population data) rigorously. Strongly significant correlations between (a) per cent of elderly persons and per cent decadal growth rate of elderly persons in general population (negative) and (b)

per cent of elderly persons and Human Development Index (positive) have been observed and two regression equations of (a) per cent of elderly persons on per cent decadal growth rate of elderly persons in general population and (b) per cent of elderly persons on human development index have been developed. This chapter also provided an overview of global ageing based on secondary obtained from Profiles of Ageing 2017, Population Division, Department of Economic and Social Affairs, United Nations.

Highlighted figures obtained from Census of India, 2011, SRS and NSSO are provided below:

- (i) Majority of Indians were of two major religions – Hinduism and Islam consisting of 79.8 and 14.2 per cent of population respectively. Some other religions were Christianity, Sikhism, Buddhism and Jainism consisting of 2.3, 1.7, 0.7 and 0.4 per cent of population respectively and others; 68.86 per cent of total populations lived in rural areas; proportion of Scheduled Caste and Scheduled Tribe populations were 16.6 and 8.6 per cent respectively. West Bengal was one of the states of India having 70.5 per cent Hindus, 27.0 per cent Muslims population; 68.13 per cent population lived in rural areas; proportion of Scheduled Caste and Scheduled Tribe populations were 23.5 and 5.8 per cent respectively.
- (ii) The states like Kerala, Dadra and Nagar Haveli were with highest (12.55) and lowest (4.04) per cent of elderly persons respectively. Per cent of elderly persons of states/union territories having low population size were low. Percentages of children and teenagers in India and all states/union territories were highest in Muslim populations among those in all classifications by locality of residence, religion, caste etc and are approximately 50 per cent and more; per cent of elderly persons to total population and sex ratio for elderly persons were generally least among Muslims followed by Scheduled Tribes. There were marked differences in life spans in populations of different religions and caste groups.
- (iii) The growth in elderly persons is due to enhancement of longevity of life because of economic well-being, better medicines and healthcare and reduction in fertility rates. Generally, per cents of elderly were (a) higher in rural areas than those in urban areas, (b) higher in female population than those of male population. The difference of per cents of elderly persons to total population in rural and urban

areas is narrowing because of reduction of disparities of population in rural and urban areas regarding social, economic, health care and other aspects.

- (iv) Per cents of elderly persons to total population in India were 8.2 and 6.4 for Hindu and Muslim population respectively and those for Scheduled Caste (SC) and Scheduled Tribe (ST) population were 7.8 and 6.9 respectively. Hindu populations in most of states/union territories of India were mature. Per cent of elderly persons was lowest in case of Muslim population (Muslim populations in most of states/union territories of India were youthful), next lowest was in case of Scheduled Tribe population because of high fertility and low literacy rate. Reason behind the variations of per cent of elderly persons to total population over state to state, religion to religion, localities of residence, communities, sex is the differences in the characteristics of population.
- (v) In India, per cent of persons aged 0–14 years has been decreasing and that aged 60+ years has been increasing, but that aged 15–59 years has been fluctuating resulting in reduction of labour force.
- (vi) Most of the states/union territories in India had already achieved targeted replacement fertility rate of 2.1, even for some of them it became less than 2.1. Hindu population grew by 16.76 per cent, while that of Muslims by 24.6 per cent. The fertility rate is falling faster in Muslims than in Hindus.
- (vii) (a) percentages of elderly persons in India and West Bengal were 8.6 and 8.5 respectively and their populations were mature, (b) the top most three states were Kerala, Goa and Tamil Nadu having per cent of elderly persons 12.6, 11.2 and 10.4 respectively and their populations were old, (c) the bottom most four states/union territories were Dadra & Nagar Haveli, Arunachal Pradesh, Daman & Diu and Meghalaya having per cent of elderly persons 4.0, 4.6, 4.7 and 4.7 respectively and their populations were youthful, (d) per cent of elderly among females was remarkably higher than that among males, (e) per cent of elderly persons among Muslims were remarkably least among all religious communities, (f) per cent of elderly persons in urban areas in most cases was remarkably higher than that in rural areas and (g) per cent of elderly persons among ST population was least than those among non-ST populations.

- (viii) In 2015, HDI of Kerala and West Bengal were 0.712 and 0.604 respectively. It is better to note that Kerala having highest (a) per cent of elderly persons to total population, (b) highest expectancy at birth and age 60 for both rural and urban areas, (c) literacy rate, (d) sex ratio among all the states and union territories of India. HDI of India in 2016 was 0.604.
- (ix) In West Bengal, three districts namely, Murshidabad, Malda and Dinajpur (N) were having top most Muslim-majority population with 66.3, 51.3 and 49.9 per cent respectively of total population; respective per cent of elderly persons were 7.0, 6.4 and 6.3.
- (x) Top most 5 districts with high per cent of elderly persons of West Bengal are Kolkata, 24 Parganas (N), Hugli, Nadia, Bankura - all of them belong to South Bengal while bottom most 5 districts with low per cent of elderly persons are Dinajpur (N), Malda, Jalpaiguri, Murshidabad, Birbhum. Dinajpur (N), Malda and Jalpaiguri belong to North Bengal and the districts Murshidabad, Malda and Dinajpur (N) are having Muslim-majority population. Top most three districts with respect to Scheduled Tribe populations were Jalpaiguri, Purulliya and Dinajpur (S) having 18.9, 18.5 and 16.4 per cent Scheduled Tribe populations respectively having very low Human Development Index (HDI) compared to India, West Bengal and most of the districts of West Bengal.
- (xi) Among all districts of West Bengal, coefficients of correlation of per cent of elderly persons with per cent decadal growth rate of elderly in general population and HDI were -0.864 and 0.708 respectively.
- (xii) Oldest-old group (aged 80+ years) grew faster than the other elderly age groups, particularly among females both in rural and urban areas of India and West Bengal and having higher sex ratio than other elderly age groups.
- (xiii) Life expectancy in India has increased in rural and urban areas. At birth, in rural areas, it has increased from 48 years in 1970-75 to 67.1 years in 2011-15; while in urban areas, it has increased from 58.9 years to 71.9 years. Kerala has got the highest life expectancy at birth followed by Maharashtra and Punjab. The life expectancies at birth in Kerala were 72.2 years and 78.2 years for males and females respectively; those at age 60 years in Kerala were 18.2 years and 22.1 years for males and females respectively.

- (xiv) The old-age dependency ratio has an increasing trend and the ratio has increased from 10.9 per cent in 1961 to 14.2 per cent in 2011. The gap between female and male old-age dependency ratio also has an increasing trend and those two ratios were 14.9 and 13.6 respectively in 2011. There has been considerable gap in all the period of that ratio for rural and urban areas, because of a relatively higher concentration of working age population in urban areas. The ratios were 15.1 and 12.4 for rural and urban areas respectively.
- (xv) Since elderly females are expected to live more years than elderly males, per cent of elderly female heads is almost twice of that of elderly male heads, per cent of elderly female head in West Bengal was more than that of India.
- (xvi) Per cent of elderly persons not dependent on others were (a) higher in urban areas than that in rural areas and (b) remarkably higher among elderly males than that of elderly females, reasons behind the statement are elderly persons of urban areas and/or elderly males are more likely to remain in workforce and/or are economically well-being than others.
- (xvii) About 70–85 per cent of dependent elderly persons were supported by their own children.
- (xviii) Of the economically independent elderly men, more than 90 per cent reported to be living with one or more dependents, while among economically independent elderly women, about 65 per cent were having one or more dependents. Elderly females were having lesser number of dependents than elderly males in both rural and urban areas.
- (xix) Proportion of elderly non-workers in urban areas was remarkably higher than that in rural areas. A remarkable proportion of elderly persons at the age 60 years, even at the age 80 years remained in working condition.
- (xx) Literacy levels among elderly of (a) rural and urban areas, (b) males and females have improved tremendously over 2001 to 2011. There were huge gaps of literacy rates of elderly between (a) rural and urban areas and (b) males and females. Literacy rates for elderly in West Bengal were better than those in India.
- (xxi) Despite illness higher proportion of elderly men seemed to be feeling better health condition than elderly women. More elderly men and women in urban areas felt to have good/fair health as compared to elderly persons in rural areas.

- (xxii) In both rural and urban areas, elderly men were more mobile than elderly women. About 90 per cent of elderly were still mobile; it is a good indicator for the well-being of the elderly persons.
- (xxiii) Per cent of currently married elderly women was lower than the per cent of currently married elderly men. After age of 70 years, more than 60 per cent of women became widows. More than 80 per cent of elderly males, but less than 50 per cent of elderly females were currently married.
- (xxiv) More than 56 per cent of elderly persons lived with their spouse and 32 per cent of elderly persons live with their children.
- (xxv) Elderly persons of present days are generally living longer years and better than those of yesterdays socially, economically, physically.

CHAPTER 4

NATURE AND PATTERN OF AGEING AND THE STATUS OF ELDERLY AMONG MUSLIM AND NON-MUSLIM POPULATION IN INDIA, WEST BENGAL AND MALDA DISTRICT

4.1 Introduction

The present chapter presents nature and pattern of ageing and the status of elderly among Muslim and non-Muslim population in India, West Bengal and Malda district. Malda is one of the Muslim dominated districts of West Bengal. Studying the problem on population ageing over religion is most important because the amount of variation of magnitudes of population ageing over different categories of religion is highest among those of other categories.

Per cents of population and decadal growth rates of population in India according to religious groups and census wise is shown in Table 4.1.

Table 4.1. Per cent of Population and Per cent Decadal Growth Rates of Population in India Religious Group and Census wise

Religion	Per cent of population			Per Cent Decadal growth rate		
	1991	2001	2011	1981 - 1991	1991 - 2001	2001 - 2011
Overall	-	-	-	23.9	21.5	17.7
Hindu	81.5	80.5	79.8	22.7	19.9	16.8
Muslim	12.6	13.4	14.2	32.9	29.3	24.6
Christian	2.3	2.3	2.3	17.7	22.5	15.5
Sikh	1.9	1.9	1.7	25.5	16.9	8.4
Buddhist	0.8	0.8	0.7	36.1	22.8	6.1
Jain	0.4	0.4	0.4	4.1	25.9	5.4
Others	0.4	0.7	0.9	15.8	-	-

Source: The Indian Express, August 27, 2015 Written by Poonam Muttreja, Executive Director, Population Foundation of India

Sex ratio, literacy rate and work participation rate of all ages in India religious group wise according to Census of India 2011 is provided in Table 4.2. According to Census of India 2011, literacy rate (per cent) and work participation rate (per cent) in general population of India were lowest among Muslim population. Literacy rates, work participation among Muslim community were lowest among those of other religious communities. Sex ratio, literacy rate (per cent), work participation rate (per cent) of all ages is highest among Christian, Jain and Buddhist respectively. These are major determinants for the lowest per cent of elderly persons among Muslim population.

Table 4.2. Sex ratio, Literacy Rate (per cent) and Work Participation Rate (per cent) of All Ages in India Religious Group Wise According to Census of India, 2011

Religion	Sex ratio	Literacy rate (per cent)	Work participation rate (per cent)
Overall	943	74.1	39.8
Hindu	939	73.3	41.0
Muslim	951	68.5	32.6
Christian	1023	84.5	41.9
Sikh	903	75.4	36.3
Buddhist	965	81.3	43.1
Jain	954	94.9	35.5
Others	959	-	-

Source: Census of India, 2011 (Percentages were computed by researcher)

The main objectives of the present chapter are (a) to assess and compare the situations of population ageing and social security of the elderly persons among Muslims with non-Muslims in India, West Bengal and Malda district and (b) to provide an overview of population ageing in Muslim countries in the world. Malda district had 51.27, 47.99 and 0.74 per cents of total populations belonging to Muslim, Hindu and other religious communities respectively according to Census of India 2011. The study is based on both secondary and primary data. For the purpose of field survey, Malda district was selected purposively.

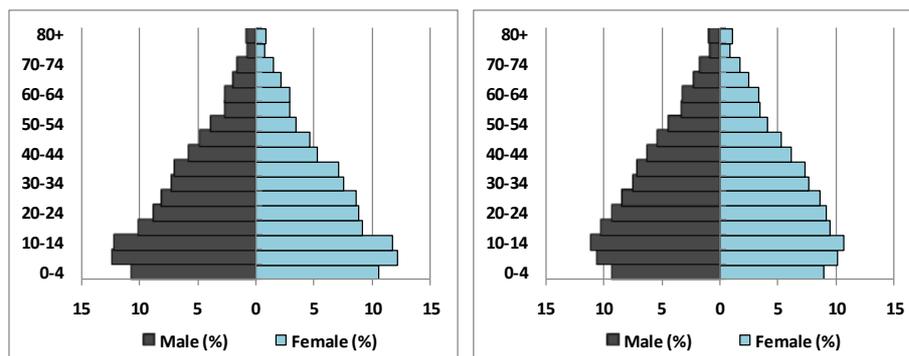
4.2 Data and Methodology

For collecting secondary data, we have mentioned Hindu population as non-Muslim one. Secondary data relating to population ageing of this district were collected from Census of India 2001 and 2011. According to Census of India 2011, in Malda district, (a) percentages of total population in rural and urban areas were 86.4 and 13.6 respectively and (b) percentages of elderly populations in rural and urban areas were 85.3 and 14.7 respectively. Primary data were collected following the sampling methods as follows. ‘English Bazar’ town was selected at random from the towns of Malda. One ward out of the wards of the selected town was selected at random. Again for collecting data from rural areas, one block ‘Kaliachak-I’ with 89.4 per cent Muslim population from more Muslim populated blocks and one block ‘Gazole’ with 24.1 per cent Muslim population from less Muslim populated blocks were selected at random (Block (Pachayat Samity) wise per cent of Muslims to total population in Malda district for census 2001 and 2011 is given in Appendix–C.1). From each of those two selected blocks, two villages were selected at random. At the last stage, from each of selected ward and villages, 25 households having at least one elderly person were selected at random. Two types of

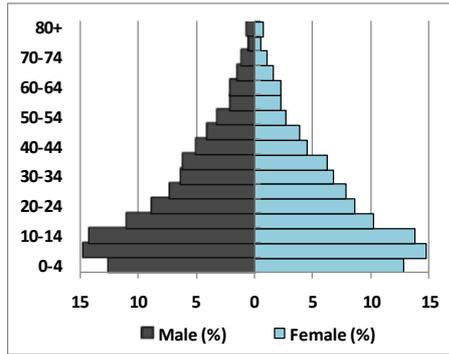
questionnaire were used: ‘Household Questionnaire’ for collecting data related to household details and ‘Elderly Persons Questionnaire’ for collecting data from each elderly person of the household. Rural with more than or equal to 50 per cent Muslim population was mentioned as rural (more Muslim) and rural with less than 50 per cent Muslim population was mentioned as rural (less Muslim). Then for collecting primary data, three defined localities of residence, namely, urban, rural (less Muslim) and rural (more Muslim) with 25, 50 and 50 sampled households were taken respectively. According to Census of India, 2011, about 75 per cent of households do not have elderly family members, therefore considering the proportions of population in rural and urban areas of Malda district, taking sample sizes 100 from rural and 25 from urban areas, that is the ratio of sample sizes from rural and urban areas in the ratio 4:1 (proportional allocation) may be justified. Again, taking sample size more than 25 from each sampled village/ward may or may not be possible.

4.3 Age-sex Distribution of Total Population in India, West Bengal and Malda District

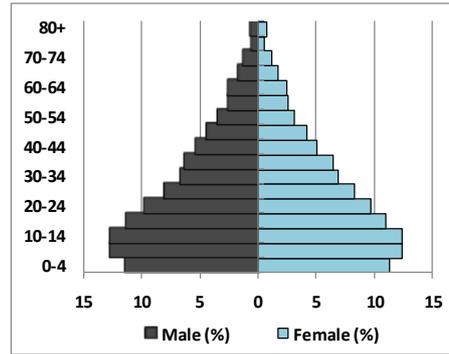
Age-sex distribution of total population in Malda district has been presented through the following population pyramids (Figures 4.1- 4.9). The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an increase in the proportion of elderly population, in this case shape of population pyramid has slightly become broad base in 2011 compared with that in 2001). Shapes of population pyramids in case of Hindu and Muslim populations are shrunken base and broad base respectively indicates that the rate of ageing in Hindu population is higher than Muslim.



India (Hindu): 2001 India (Hindu): 2011
 Figure 4.1: Population Pyramids for India (Hindu) for 2001 and 2011

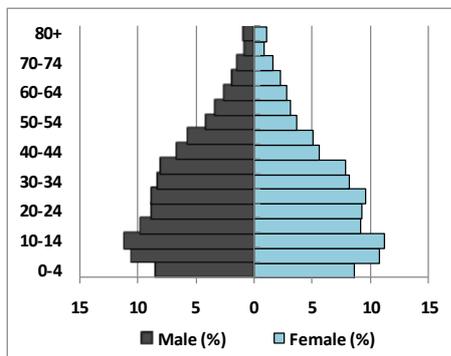


India (Muslim): 2001

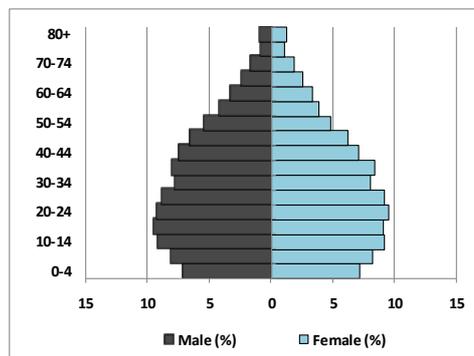


India (Muslim): 2011

Figure 4.2: Population Pyramids for India (Muslim) for 2001 and 2011

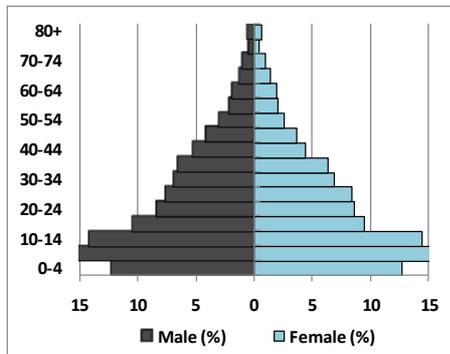


West Bengal (Hindu): 2001

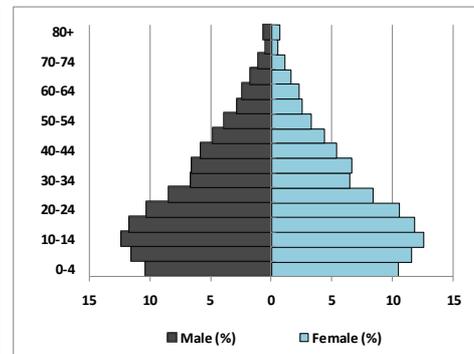


West Bengal (Hindu): 2011

Figure 4.3: Population Pyramids for West Bengal (Hindu) for 2001 and 2011

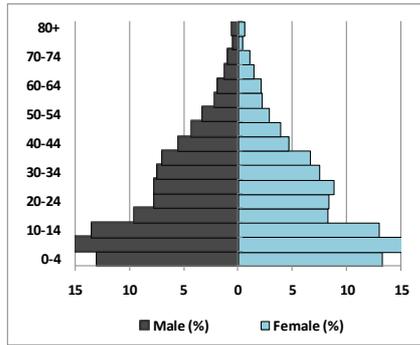


West Bengal (Muslim): 2001

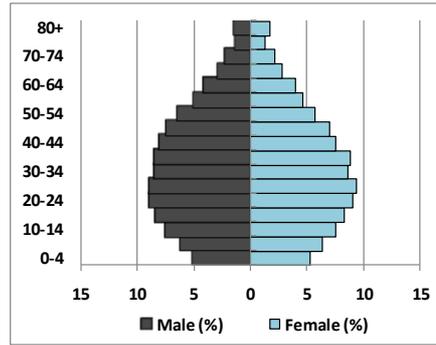


West Bengal (Muslim): 2011

Figure 4.4: Population Pyramids for West Bengal (Muslim) for 2001 and 2011

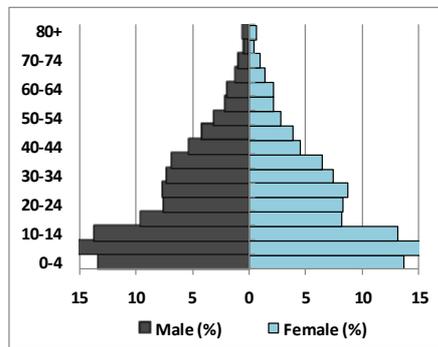


Malda (Total): 2001

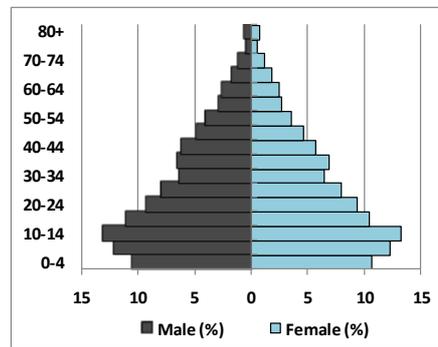


Malda (Total): 2011

Figure 4.5: Population Pyramids for Malda district (Total) for 2001 and 2011

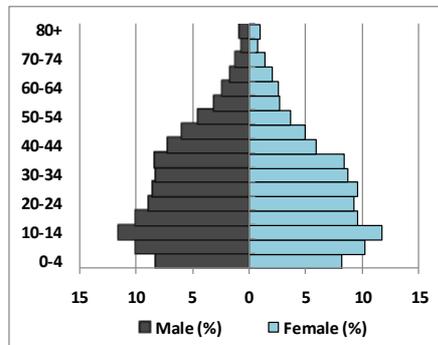


Malda (Rural): 2001

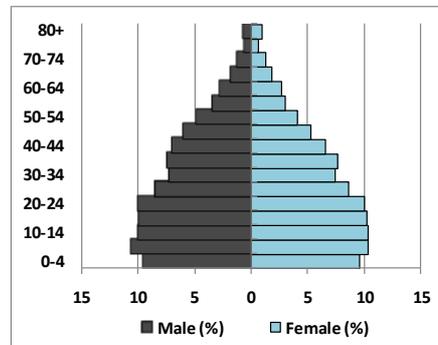


Malda (Rural): 2011

Figure 4.6: Population Pyramids for Malda district (Rural) for 2001 and 2011

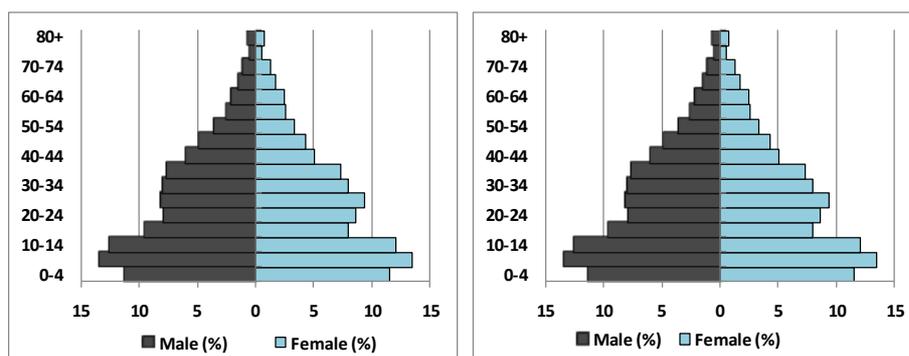


Malda (Urban): 2001



Malda (Urban): 2011

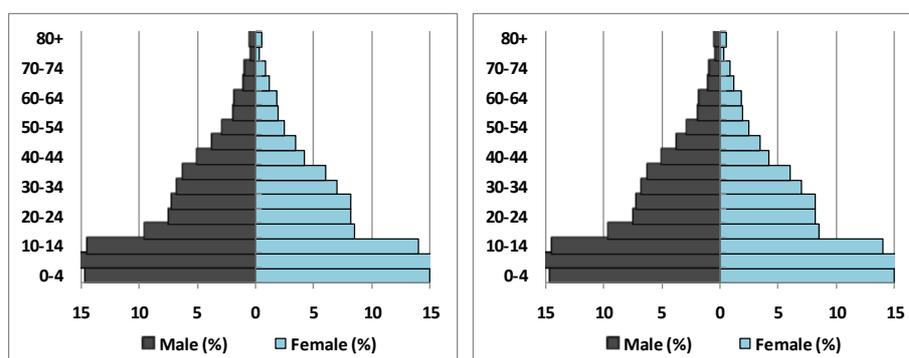
Figure 4.7: Population Pyramids for Malda district (Urban) for 2001 and 2011



Malda (Hindu): 2001

Malda (Hindu): 2011

Figure 4.8: Population Pyramids for Malda district (Hindu) for 2001 and 2011



Malda (Muslim): 2001

Malda (Muslim): 2011

Figure 4.9: Population Pyramids for Malda district (Muslim) for 2001 and 2011

4.4 Ageing in Malda district compared to West Bengal and India

Per cent distribution of population by age groups according to censuses 2001 and 2011 along with per cent decadal growth rate of elderly persons in general and elderly population over 2001–11 among Hindu and Muslim populations in India, West Bengal and Malda district are provided in Table 4.3. For all religious communities, per cent of population aged 0–14 years decreased over 2001–2011, but there were increasing trends in per cent of population for other age-groups. Per cent decadal growth rate of elderly persons in total population over 2001-2011 among Muslim population was lowest. In India, West Bengal and Malda district, comparing Hindu and Muslim populations, (a) per cent of persons in the age group 0-14 years was higher among Muslims than Hindus indicating higher birth rates among Muslims than Hindus, (b) per cent of persons in the age group 15-59 years (normal working age group) was lower among Muslims than Hindus indicating lesser work participation among Muslims than Hindus and (c) per cent of persons in the age group 60+ years (per cent of elderly persons) was lower among Muslims than Hindus. These variations between Hindus and Muslims are very prominent in Malda district.

Table 4.3. Per cent Distribution of Elderly Population by Age Groups According to Census of India, 2001 and 2011 among Hindu and Muslim Populations in India, West Bengal and Malda District

	Religion		Age groups (years)						Per Cent Decadal growth rate in	
			0 - 14		15 - 59		60 + (Per cent of elderly)		general population 2001 - 11	elderly population 2001 - 11
			2001	2011	2001	2011	2001	2011		
India	Hindu	Person	34.9	30.2	57.5	60.9	7.6	8.9	16.1	35.3
		Male	35.0	30.7	57.7	60.9	7.3	8.4	15.7	35.1
		Female	34.5	29.8	57.5	60.9	8.0	9.3	16.5	35.6
	Muslim	Person	41.2	36.4	53.0	57.2	5.8	6.4	9.1	39.1
		Male	41.3	36.6	53.1	57.1	5.6	6.3	9.2	39.1
		Female	41.2	36.1	52.9	57.3	5.9	6.6	9.0	39.1
West Bengal	Hindu	Person	30.2	24.4	62.0	66.2	7.8	9.4	23.9	33.0
		Male	30.0	24.3	62.6	66.6	7.4	9.1	26.6	35.8
		Female	30.5	24.4	61.2	65.9	8.3	9.7	21.5	30.4
	Muslim	Person	42.3	34.2	52.7	59.6	5.0	6.1	10.9	47.0
		Male	41.6	34.0	53.5	59.9	4.9	6.0	11.4	48.6
		Female	42.8	34.5	52.0	59.2	5.2	6.2	10.3	45.4
Malda	Hindu	Person	37.1	31.1	56.8	61.7	6.1	7.2	13.2	39.2
		Male	37.1	30.8	57.3	62.4	5.6	6.8	13.4	44.8
		Female	37.2	31.3	56.2	61.1	6.6	7.6	13.0	34.2
	Muslim	Person	45.7	38.8	49.9	55.6	4.4	5.6	10.6	59.9
		Male	45.6	38.5	50.1	55.8	4.3	5.7	11.2	65.3
		Female	45.8	39.0	49.6	55.4	4.6	5.6	9.9	54.5

Source: Census of India, 2001 and 2011(Percentages were computed by researcher)

Per cent of elderly persons in different elderly age-groups among Hindu and Muslim communities in India, West Bengal and Malda district is provided in Table 4.4.

Table 4.4. Per cent of Elderly in Different Elderly Age-groups Among Hindu and Muslim Communities in India, West Bengal and Malda District

			60-64	65-69	70-74	75-79	80+	60+
India	Hindu	Person	3.2	2.3	1.6	0.8	1.0	8.9
		Male	3.1	2.1	1.6	0.7	0.9	8.4
		Female	3.3	2.4	1.7	0.8	1.0	9.3
	Muslim	Person	2.4	1.6	1.2	0.5	0.7	6.4
		Male	2.4	1.6	1.1	0.5	0.6	6.3
		Female	2.4	1.7	1.2	0.5	0.8	6.6
West Bengal	Hindu	Person	3.3	2.4	1.7	0.9	1.1	9.4
		Male	3.3	2.3	1.6	0.9	1.0	9.1
		Female	3.3	2.5	1.8	1.0	1.2	9.7
	Muslim	Person	2.3	1.6	1.1	0.5	0.7	6.1
		Male	2.3	1.6	1.0	0.5	0.6	6.0
		Female	2.3	1.6	1.1	0.5	0.7	6.2
Malda	Hindu	Person	2.7	1.8	1.2	0.6	0.7	7.2
		Male	2.7	1.8	1.2	0.5	0.7	6.8
		Female	2.8	2.0	1.3	0.6	0.8	7.6
	Muslim	Person	2.2	1.5	1.0	0.4	0.5	5.6
		Male	2.2	1.5	1.0	0.4	0.5	5.7
		Female	2.2	1.5	1.0	0.4	0.6	5.6

Source: Census of India, 2011(Percentages were computed by researcher)

It is noticeable that per cent of elderly persons is higher among Hindus than Muslims in all elderly age groups, particularly in Malda district. This variation between Hindus and Muslims is very prominent in oldest-old age group (80+ years). It is also noticeable that in India, West Bengal and Malda district, per cent of elderly female was higher than that of elderly male. In India, West Bengal and Malda district; Hindu population was mature, whereas Muslim population was youthful.

Sex ratio of elderly persons and general population among Hindu and Muslim communities in India, West Bengal and Malda district according to census 2011 is provided in Table 4.5. It was observed that in India, West Bengal and Malda district (a) sex ratios of elderly persons and general population of Hindu Community were higher than those of Muslim community and (b) in both Hindu and Muslim communities, (1) sex ratio of elderly persons was higher than that of general population, (2) sex ratio of general population was less than 1000, (3) sex ratio of elderly persons mostly is greater than 1000 indicating elderly females live longer than elderly males.

Table 4.5. Sex ratio of Elderly and General Population in India, West Bengal and Malda District

		60-64	65-69	70-74	75-79	80+	60+	All ages
India	Hindu	1016	1048	992	1054	1136	1035	939
	Muslim	961	1009	954	1046	1121	995	951
West Bengal	Hindu	954	1004	1027	1058	1188	1015	948
	Muslim	930	974	1002	1020	1109	979	951
Malda	Hindu	981	1036	1076	1114	1211	1044	936
	Muslim	914	963	943	961	1036	947	952

Source: Census of India, 2011 (Sex ratios were computed by researcher)

Per cent distribution of households with number of elderly persons in Malda district according to census 2011 is provided in Table 4.6. More than 70 per cent households in Malda district did not have any elderly member in the household.

Table 4.6. Per cent Distribution of Households with Number of Elderly in Malda District

Number of elderly in household	Total	Rural	Urban
None	75.5	75.9	72.8
1	19.2	18.8	21.5
2	5.2	5.2	5.4
3	0.1	0.1	0.2
4	0.0	0.0	0.0

Source: Census of India, 2011 (Percentages were computed by researcher)

According to Census of India 2011, in both rural and urban areas, per cent of households without any elderly family member in Malda district was higher than those of

India and West Bengal that is because Malda district is Muslim dominated one and its per cent of elderly persons was lesser than those of India and West Bengal.

Per cent distribution of households having elderly head by locality of residence and sex in Malda district according to census 2011 is provided in Table 4.7. Since elderly females are expected to live more years than elderly males, per cent of elderly female heads was almost twice of that of elderly male heads. Nearly 20 per cent of households in Malda district were having elderly heads. According to Census of India 2011, per cent of households having elderly head in Malda district was less than those in India and West Bengal.

Table 4.7. Per cent Distribution of Households Having Elderly Head by Locality of Residence and Sex in Malda District

Locality of residence	Sex of elderly head		
	Person	Male	Female
Total	18.0	15.3	37.5
Rural	17.6	15.0	37.2
Urban	20.7	17.6	38.6

Source: Census of India, 2011 (Percentages were computed by researcher)

As per Census of India 2011, in India and West Bengal, per cent of working elderly persons (main worker + marginal worker) among Hindu and Muslim populations is provided in Table 4.8. In case of Hindu population, elderly persons of West Bengal were less in working position than those of India; but in case of Muslim population, per cent of working elderly persons are almost same in India and West Bengal. Elderly persons of rural areas were more in working position than those of urban areas of India and West Bengal. Work participation among Muslim elderly females was very low compared that among Hindu elderly females in India, West Bengal and Malda district.

Table 4.8. Per cent of Working Elders among Hindu and Muslim Populations in India and West Bengal Locality of Residence and Sex wise

		Hindu			Muslim		
		Person	Male	Female	Person	Male	Female
India	Total	42.3	60.7	24.6	39.1	62.1	16.0
	Rural	47.7	66.6	29.5	43.8	67.6	19.7
	Urban	28.2	45.2	11.6	31.6	53.2	10.1
West Bengal	Total	29.9	49.0	11.2	39.6	61.9	11.4
	Rural	33.9	56.5	12.8	38.0	64.7	11.1
	Urban	24.2	38.8	8.8	32.8	51.7	12.3

Source: Census of India, 2011 (Percentages were computed by researcher)

As per Census of India 2011, in Malda district, 65.8 per cent of elderly males, 18.0 per cent of elderly females in rural area engaged in economic activity in the capacity of main or marginal worker (occasional worker). In urban areas it was only 47.6 per cent

of elderly males and 12.3 per cent of elderly females engaged in economic activity. Proportion of elderly non-workers in urban areas was remarkably higher than that in rural areas. Per cent of elderly working in Malda district according to Census of India, 2011 is provided in Table 4.9.

Table 4.9. Per cent of Elderly Working in Malda District

	Main worker			Marginal worker			Main worker + Marginal worker		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	30.0	51.8	8.3	10.1	11.3	8.9	40.1	63.1	17.2
Rural	30.8	53.5	8.2	11.0	12.3	9.8	41.8	65.8	18.0
Urban	25.5	41.9	8.5	6.7	5.7	3.8	30.2	47.6	12.3

Source: Census of India, 2011 (Percentages were computed by researcher)

Per cent distribution of marital status of elderly persons in Malda district according to Census of India 2011 is provided in Table 4.10. Per cent of currently married elderly males was more than twice that of currently married elderly females. Again per cent of currently married elderly males in Malda district was more than those in India and West Bengal, but per cent of currently married elderly females in Malda district was lesser than those in India.

Table 4.10. Per cent Distribution of Marital Status of Elderly in Malda District

	Never married		Currently married		Widowed		Separated		Divorce	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total	2.1	1.9	86.7	39.3	10.9	58.1	0.3	0.4	0.1	0.3
Rural	2.0	1.8	86.6	39.8	11.1	57.7	0.3	0.4	0.2	0.3
Urban	2.8	2.8	86.8	36.1	10.0	60.3	0.3	0.4	0.1	0.3

Source: Census of India, 2011 (Percentage were computed by researcher)

Distribution of number of disabled persons per 1000 elderly persons in Malda district is provided in Table 4.11.

Table 4.11. Distribution of Number of Disabled Persons per 1000 Elderly in Malda District According to Locality of Residence

	Disability Type								
	Total Disabilities	In Seeing	In Hearing	In Speech	In Movement	Mental Retardation	Mental Illness	Any Other	Multiple Disabilities
Total	52	16	8	1	11	2	2	6	7
Rural	54	16	8	1	11	2	2	6	8
Urban	42	12	7	2	9	2	1	5	5

Source: Census of India, 2011 (Numbers were computed by researcher)

Disabilities due to vision and movement were more serious problems for the elderly persons in both rural and urban areas of Malda district. These disabilities of elderly persons were more acute in Malda district than West Bengal as a whole.

Per cent distribution of literacy of elderly persons in India and West Bengal according to sex among Hindu and Muslim communities for the Censuses of India 2001 and 2011 is provided in Table 4.12. There were improvements of literacy among elderly persons over 2001-2011 among Hindu and Muslim communities in India and West Bengal. Among elderly persons of Hindu community, literacy level among elderly persons in West Bengal was much higher than that in India as a whole. But literacy level of elderly persons belonging to Muslim community in West Bengal was lesser than that in India as a whole. Per cent decadal growth rate of literacy among Muslim community was lesser than that among Hindu community; again it was least among Muslim community in West Bengal.

Table 4.12. Per cent Distribution of Literacy of Elderly in India and West Bengal According to Sex Among Hindu and Muslim Communities

	Census	Hindu			Muslim		
		Person	Male	Female	Person	Male	Female
India	2001	35.9	53.0	19.4	32.4	48.1	16.6
	2011	43.3	59.4	27.7	38.1	52.6	23.5
	% Decadal growth	64.1	77.8	50.9	52.7	64.2	41.1
West Bengal	2001	52.9	73.3	33.6	31.7	50.6	12.9
	2011	58.5	75.1	42.1	34.4	51.0	17.5
	% Decadal growth	75.5	80.2	70.2	40.1	51.8	27.6

Source: Censuses of India, 2001 and 2011 (Percentages were computed by researcher)

Per cent distribution of literacy of elderly persons in Malda district according to sex for the Censuses of India 2001 and 2011 is provided in Table 4.13. There were significant gaps in the literacy level of elderly persons in Malda district between (a) rural and urban areas and (b) males and females.

Table 4.13. Per cent Distribution of Literacy of Elderly in Malda District According to Sex

Census	Total			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
2001	28.7	45.5	13.2	24.9	41.8	9.3	63.8	79.7	49.1
2011	30.7	44.5	17.0	26.2	40.3	12.2	56.8	68.0	45.2
% Decadal growth	35.0	42.5	26.1	29.5	36.9	20.8	51.2	59.4	41.7

Source: Censuses of India, 2001 and 2011 (Percentages were computed by researcher)

4.5 Ageing in Malda District on the Basis of Survey Data and Comparisons among Muslim and Non-Muslim Populations in Malda District

Sampling units (s.u) of sampling frame were considered the households having at least one elderly person purposively because our study is based on elderly persons.

Per cent distribution of households with number of elderly persons versus number of households, number of generations of family members and number of elderly generations in the survey households of Malda district are provided in the Table 4.14. Number of elderly persons in the survey households was 1 to 3; it was 1 in most of the households, 3 in some households in rural (less Muslim) area. Number of generations of family members and number of elderly generations were 3 and 1 respectively in most of the households. Number of generations in the households in urban area was at least 2. Per cent of households having exactly 1 elderly person in the households in urban, rural (less Muslim) and rural (more Muslim) areas were 76, 76 and 84 respectively.

Table 4.14. Per cent Distribution of Households with Number of Elderly, Number of Generations of Family Members and Number of Elderly Generations in Malda District

Locality of residence	No. of elderly	Household	No. of generations of family members					No. of elderly generations		
			1	2	3	4	Total	1	2	Total
Urban	1	76	0.0	26.3	73.7	0.0	100	100	0.0	100
	2	24	0.0	66.7	33.3	0.0	100	66.7	33.3	100
	Total	100	0.0	36.0	64.0	0.0	100	92.0	8.0	100
Rural (less Muslim)	1	76	26.3	26.3	47.4	0.0	100	100	0.0	100
	2	22	27.3	54.5	18.2	0.0	100	100	0.0	100
	3	2	0.0	0.0	100.0	0.0	100	0.0	100	100
	Total	100	26.3	32.0	42.0	0.0	100	98.0	2.0	100
Rural (more Muslim)	1	84	14.3	21.4	61.9	2.4	100	100	0.0	100
	2	16	0.0	25.0	75.0	0.0	100	100	0.0	100
	Total	100	12.0	22.0	64.0	2.0	100	100	0.0	100

Source: Field Survey

Per cent of households having 1, 2 and 3 generations of family members in urban, rural (less Muslim) and rural (more Muslim) areas were 0.0, 36.0 and 64.0; 26.3, 32.0 and 42.0; 12.0, 22.0 and 64.0 respectively.

Averages along with standard deviations (SD) of household size, number of children born, number of children alive and number of children living with the elderly persons of the sampled elderly in Malda district according to locality of residence is provided in Table 4.15. These averages were higher in both rural areas than those in

urban areas. Again these averages were higher in rural (more Muslim) area than those in rural (less Muslim) area in Malda district.

Table 4.15. Averages along with SDs of Household Size, Number of Children Born, Number of Children Alive and Number of Children Living with Elderly of Sampled Elderly in Malda District According to Locality of Residence (SDs are provided in brackets)

Locality of residence	Household size	No. of children born	No. of children alive	No. of children living with elderly
Urban	3.2 (1.7)	2.3 (2.0)	2.3 (1.7)	1.5 (0.7)
Rural (less Muslim)	3.6 (1.5)	3.4 (1.7)	3.4 (1.6)	2.9 (0.6)
Rural (more Muslim)	4.9 (1.7)	4.7 (1.8)	4.2 (1.3)	4.0 (0.5)

Source: Field Survey

It is evident from the above table that birth rate in rural (more Muslim) area were very high compared to those in other areas. Again in respect of number of children living with elderly persons is remarkably high in rural (more Muslim) area compared to other areas.

There are significant differences of averages of household size, number of children born, number of children alive and number of children living with the elderly persons of the sampled elderly between locality of residence in Malda district with p-values <0.001 in all cases.

Living arrangement is an important factor for any human being, particularly for elderly persons. Per cent distribution of living arrangements for the elderly persons according to locality of residences and sex in the households of Malda district is shown in Table 4.16.

Table 4.16. Per cent Distribution of Living Arrangements of Elderly in Malda District

Locality of residence	Sex	Living Arrangement				Total
		Alone	With spouse only	With spouse, sons, daughters and/or others	Without spouse, but with sons, daughters and/or others	
Urban	Person	0.0	0.0	48.4	51.6	100
	Male	0.0	0.0	90.0	10.0	100
	Female	0.0	0.0	28.5	71.4	100
Rural (less Muslim)	Person	12.7	14.3	35.5	37.5	100
	Male	0.0	19.2	57.7	23.1	100
	Female	21.6	10.8	21.6	46.0	100
Rural (more Muslim)	Person	8.5	1.7	49.1	40.7	100
	Male	4.2	4.2	83.3	8.3	100
	Female	11.4	0.0	25.7	62.9	100

Source: Field Survey

Per cent of elderly persons living alone or with spouse only was very limited particularly for elderly males in all the locality of residences. 21.6 and 11.4 percent of elderly females lived alone in rural (less Muslim) and rural (more Muslim) areas respectively (those elderly females were beggars). Living arrangements of majority of elderly males were with spouses, sons, daughters and/or others which were very high compared to those for elderly females in all the locality of residences. In case of rural (less Muslim) area in Malda district, 10 to 20 per cent of elderly persons of both the sex were living with spouse only, even though some of them had children. Living arrangements of majority of elderly males were with spouses, sons, daughters and/or others which were very high compared to those for elderly females in all the locality of residences. Reasons behind those facts were elderly females were living more years than elderly males and were becoming widows.

Per cent distribution of households with number of elderly persons versus number of dependent elderly persons, number of working elderly persons; households having elderly persons as head of household in the households in Malda district are presented in Table 4.17. Per cent of dependent elderly persons in the households were more in rural (more Muslim) area than that in rural (less Muslim) area. Per cent of working elderly persons in urban area was less than in both the rural areas. Percentages of elderly heads were 28.0, 54.0 and 48.0 in urban, rural (less Muslim) and rural (more Muslim) areas respectively. Per cent of sampled households having at least one dependent elderly person were more 50 and that figures 68, 64 and 52 in rural (more Muslim), urban and rural (less Muslim) areas respectively.

Table 4.17. Per cent Distribution of Households with Number of Elderly versus Number of Dependent elderly, Number of Working Elderly etc in Malda District

Locality of residence	No. of elders	No. of dependent elderly				No. of working elderly			Elderly head
		0	1	2	Total	0	1	Total	
Urban	1	47.4	52.6	0.0	100	78.9	21.1	100	21.1
	2	0.0	100	0.0	100	50.0	50.0	100	50.0
	Total	36.0	64.0	0.0	100	72.0	28.0	100	28.0
Rural (less Muslim)	1	63.2	36.8	0.0	100	73.7	26.3	100	39.5
	2	0.0	90.9	9.1	100	27.3	72.7	100	100
	3	0.0	0.0	100	100	0.0	100	100	100
	Total	48.0	48.0	4.0	100	62.0	38.0	100	54.0
Rural (more Muslim)	1	38.1	59.5	2.4	100	66.7	33.3	100	38.1
	2	0.0	87.5	12.5	100	37.5	62.5	100	100
	Total	32.0	64.0	4.0	100	62.0	38.0	100	48.0

Source: Field Survey

Per cent of working elderly persons were 28, 38 and 38 in urban, rural (less Muslim) and rural (more Muslim) respectively. Again per cent of elderly head in the households were 28, 54 and 48 in urban, rural (less Muslim) and rural (More Muslim) areas respectively.

Per cent of elderly persons aged 60-69, 70-79 and 80+; currently married; dependent; having dependants; head of the households; involved in day-to-day purchase, big purchase, and decision-making activities of the household; having immovable property; having liquid asset; presently working and/or pension holders among elderly persons according to locality of residence and sex in Malda district are presented in Table 4.18.

Elderly persons of rural (more Muslim) area were more dependent; having less dependants; less being head of household; less involved in day-to-day purchases and other activities, big purchases; decision-making of family; having more immovable property, liquid asset; and less presently working and/or pension holders than those of elderly person of rural (less Muslim) area.

Localities of residence were not homogeneous regarding involvement of elderly members in day-to-day purchases of the households (p-value < 0.001). Elderly males and females of the localities of residence were not homogeneous regarding involvement of elderly members in day-to-day purchases of the households, p-value < 0.001 in each case.

Table 4.18. Per cent Distribution of Elderly Aged 60-69, 70-79 and 80+ with Various Attributes in Malda District

Locality of residence	Sex	% among elderly			Currently married	Dependent	Having dependants	Head of household	Involved in household for			Having immovable property	Having liquid asset	Earning and/or pension holder
		60-69	70-79	80+					Day-to-day purchase	Big purchase	Decision-making activities			
Urban	Person	67.7	25.8	6.5	48.4	54.8	29.0	22.6	25.8	29.0	35.5	74.2	96.8	41.9
	Male	70.0	20.0	10.0	90.0	0.0	80.0	60.0	70.0	65.9	68.9	100	100	90.0
	Female	66.7	28.6	4.8	28.6	81.0	4.8	4.8	14.8	19.4	29.6	61.9	95.2	19.0
Rural (less Muslim)	Person	61.9	30.2	7.9	52.4	49.2	33.3	42.9	54.0	50.8	60.3	87.3	93.7	52.4
	Male	66.7	25.0	8.3	87.5	8.3	12.5	87.5	92.3	88.5	92.2	95.8	100	91.7
	Female	59.0	33.3	7.7	30.8	74.4	100	15.4	27.0	24.3	36.2	82.1	89.7	28.2
Rural (more Muslim)	Person	71.2	25.4	3.4	50.8	63.8	31.0	40.7	45.8	47.5	52.9	100	98.3	39.0
	Male	79.2	16.7	4.2	87.5	25.0	29.2	91.7	87.5	87.5	85.2	100	100	79.2
	Female	65.7	31.4	2.9	25.7	91.2	2.9	5.7	21.1	21.4	32.6	100	97.1	11.4

Source: Field Survey

Localities of residence were not homogeneous regarding involvement of elderly members in big purchases of the households (p-value < 0.001). Elderly males and females of the localities of residence were not homogeneous regarding involvement of elderly members in big purchases of the households, p-value < 0.001 in each case.

Localities of residence were not homogeneous regarding involvement of elderly members in decision-making of the households (p-value = 0.006). Elderly males and females of the localities of residence were not homogeneous regarding involvement of elderly members in decision-making of the households, p-value = 0.009 in case of urban area, p-value < 0.001 in rural (less Muslim) and rural (more Muslim) areas.

To study the share of financial contribution of the elderly members to the their respective households of the households in Malda district, Table 4.19 presents the percent distribution of the households according to locality of residence, total households monthly income and monthly income (including pension, if any) of the elderly persons of the respective households. It was evident from the following table that the financial contributions of the elderly persons to their respective households were negligible. Percent of elderly persons with no contribution to their respective households were 32, 30 and 52 in urban, rural (less Muslim) and rural (more Muslim) areas respectively. Total household monthly income and monthly income (including pension, if any) of the elderly persons were not associated within and between localities of residences.

Table 4.19. Per cent Distribution of Households According to Household Monthly Income and Monthly Income (including pension, if any) of Elderly in Malda District

Locality of residence	Household monthly income (in Rs)	Monthly income (in Rs) (including pension, if any) of elderly			Total
		Nil	1 – 10,000	10,001 and above	
Urban	1 – 15,000	16	20	4	40
	15,001 – 30,000	16	20	8	44
	30,001 and above	0	12	4	16
	Total	32	52	16	100
Rural (less Muslim)	1 – 15,000	24	34	6	64
	15,001 – 30,000	6	8	6	20
	30,001 and above	0	6	10	16
	Total	30	48	22	100
Rural (more Muslim)	1 – 15,000	46	32	2	80
	15,001 – 30,000	6	2	8	16
	30,001 and above	0	0	4	4
	Total	52	34	14	100

Source: Field survey

Regarding the financial supports for the elderly persons from kin (not family members) of the households of Malda District, Table 4.20 provides the percent

distribution of elderly persons enjoyed that supports according to locality of residence and sex.

Table 4.20. Per cent Distribution of Elderly Financially Supported by Kin (Not Household Member) in Malda District

Locality of residence	Sex	Financial support from kin (not household member)		Total
		Yes	No/Does not arise	
Urban	Person	25.8	74.2	100
	Male	10.0	90.0	100
	Female	38.1	61.9	100
Rural (less Muslim)	Person	40.3	59.7	100
	Male	34.6	65.4	100
	Female	44.4	55.6	100
Rural (more Muslim)	Person	15.3	84.7	100
	Male	8.3	91.7	100
	Female	20.0	80.0	100

Source: Field survey

Elderly males and females of all localities of residence were homogeneous regarding financial supports from sons, daughters, brothers and relatives (not household members), but localities of residence were not homogeneous regarding outside financial support (p-value = 0.008). Female elderly were mostly to get outside financial supports than male elderly in all localities of residence.

Regarding beneficiary covered under National Old Age Pension Scheme (NOAPS), only a negligible portion of elderly females of the households of Malda district were covered under the said scheme and the amount of money provided to them were very small (Rs 400 monthly). Percent distribution of elderly females in the households of Malda district covered under National Old Age Pension Scheme is presented in Table 4.21.

Table 4.21. Per cent Distribution of Elderly Females Covered under NOAPS in Malda District

Locality of residence	Percent covered under NOAPS out of elderly females	Percent covered under NOAPS out of elderly persons
Urban	14.3	9.7
Rural (less Muslim)	18.9	11.1
Rural (more Muslim)	14.3	8.5

Source: Field survey

Regarding economic security of the elderly persons of Malda district, Table 4.22 provides the percent distribution of the elderly persons (a) capable of spending money for buying clothes, foods, medicines etc for them or toys for their grandchildren, (b) getting

sufficient food and clothes, they needed and (c) getting sufficient medicines and health care whenever they needed according to locality of residence and sex.

Table 4.22. Per cent Distribution of Elderly Getting Necessities of Life in Malda district

Locality of residence	Sex	Capable of spending money for buying	Getting sufficient food and clothes	Getting sufficient medicines and health care
Urban	Person	38.7	90.3	64.5
	Male	40.0	90.0	80.0
	Female	38.1	90.5	57.1
Rural (less Muslim)	Person	30.2	69.8	61.9
	Male	57.7	84.6	80.8
	Female	10.8	59.5	48.6
Rural (more Muslim)	Person	18.6	64.4	42.4
	Male	37.5	79.2	58.3
	Female	5.7	54.3	31.4

Source: Field survey

Per cent of elderly persons capable of spending money for buying in urban, rural (less Muslim) and rural (more Muslim) areas were 38.7, 30.2 and 18.6 respectively. Per cent of elderly persons getting sufficient food and clothes in urban, rural (less Muslim) and rural (more Muslim) areas were 90.3, 69.8 and 64.4 respectively.

Per cent of elderly persons getting sufficient medicines and health care in urban, rural (less Muslim) and rural (more Muslim) areas were 64.5, 61.9 and 42.4 respectively. Therefore elderly persons in rural (more Muslim) area are in the worst conditions among others in respects of capable of spending money for buying, getting sufficient food and clothes and getting sufficient medicines and health care. Reason behind the same is that the economic condition of Muslims are worst compared to others.

The determinants of social, economic and health conditions of people are age, gender, marital status, locality of residence, working status and possessing movable and immovable assets. Generally females (particularly elderly females) are less favourably treated than elderly males in the society.

Elderly males and females of urban areas were homogeneous in respect of (a) having capabilities of spending money for buying, (b) getting sufficient food and clothes and (c) getting sufficient medicines and health care. Elderly males and females of rural (less Muslim) and rural (more Muslim) areas were not homogeneous regarding capability of spending money for buying by elderly with respective p-values < 0.001 and 0.002. Both elderly males and females of rural (more Muslim) areas had less capabilities in respect of capable of spending money for buying compared to those of urban and rural

(less Muslim) areas. Elderly males and females of rural (less Muslim) and rural (more Muslim) areas were not homogeneous regarding getting sufficient food and clothes by elderly persons with respective p-values 0.032 and 0.050. Elderly males and females of rural (less Muslim) and rural (more Muslim) areas were not homogeneous regarding getting sufficient medicines and health care by elderly persons with respective p-values 0.010 and 0.040. Localities of residence in Malda district were not homogeneous in respect of (a) having capabilities of spending money for buying, (b) getting sufficient food and clothes and (c) getting sufficient medicines and health care with respective p-values 0.042, 0.031 and 0.046.

Regarding the physical mobility, hospitalization during last one year and feeling depressed of the elderly persons in the households in Malda district, findings are presented in Table 4.23. Per cent of elderly persons felt depressed in urban, rural (less Muslim) and rural (more Muslim) areas were 41.9, 57.1 and 49.2 respectively. Per cent of elderly persons mobile in urban, rural (less Muslim) and rural (more Muslim) areas were 90.3, 84.1 and 83.1 respectively. Per cent of elderly persons hospitalized in urban, rural (less Muslim) and rural (more Muslim) areas were 16.1, 17.5 and 6.8 respectively. Elderly females were more depressed than others. Very least percent of elderly persons were confined to bed. Regarding hospitalization during last year of elderly, elderly males and females of all localities of residence and localities of residence are homogeneous in this respect. Elderly males of urban area and elderly of all sex of rural (more Muslim) area were least hospitalized during last one year.

Table 4.23. Per cent Distribution of Elderly Regarding Their (a) Physical Mobility, (b) Hospitalization during Last One Year, (c) Depression in Malda District

Locality of residence	Sex	Degree of physical mobility				Hospitalization during last one year	Felt depressed
		Mobile	Confined to bed	Confined to house & others	Total		
Urban	Person	90.3	3.2	6.5	100	16.1	41.9
	Male	80.0	0.0	20.0	100	0.0	30.0
	Female	95.2	4.8	0.0	100	23.8	47.6
Rural (less Muslim)	Person	84.1	0.0	15.9	100	17.5	57.1
	Male	88.5	0.0	11.5	100	15.4	38.5
	Female	81.1	0.0	18.9	100	18.9	70.3
Rural (more Muslim)	Person	83.1	5.1	11.8	100	6.8	49.2
	Male	91.7	4.2	4.1	100	8.3	33.3
	Female	77.2	5.7	17.1	100	5.7	60.0

Source: Field survey

Regarding feeling depressed among the elderly members of the household of Malda district, elderly males and females in urban area are homogeneous, but those in rural (Less Muslim) and rural (more Muslim) areas were not homogeneous and respective

p-values are 0.012 and 0.044. Localities of residence of Malda district were homogeneous in this respect. A significant per cent of elderly persons felt depressed. Regarding degree of physical mobility of elderly persons, elderly males and females of urban areas were not homogeneous (p-value = 0.088), but those of rural (less Muslim) and rural (more Muslim) were homogeneous in this respect, localities of residence were also homogeneous in this respect. Per cent of elderly females of rural (more Muslim) area were less mobile and more confined to bed than others.

Per cent distribution of elderly members of the households in Malda district associated with (a) cultural activities of their localities, (b) any religious organizations/associations and (c) any political activities according to locality of residence and sex wise are presented in Table 4.24. Elderly females of urban areas were more associated with (a) different activities including cultural of their localities, (b) any religious organizations/associations than elderly males, but the reverse was in case of association with any political activities.

Table 4.24. Per cent Distribution of Elderly Associated with Cultural Activities, Religious Organizations/Associations and Political Activities in Malda District

Locality of residence		Associated with cultural activities	Associated with religious organizations/ associations	Associated with political activities
Urban	Person	22.6	48.4	29.0
	Male	10.0	20.0	50.0
	Female	28.6	61.9	19.0
Rural (less Muslim)	Person	12.7	33.3	11.1
	Male	15.4	38.5	19.2
	Female	10.8	29.7	5.4
Rural (more Muslim)	Person	10.2	45.8	13.6
	Male	25.0	70.8	29.2
	Female	0.0	28.6	2.9

Source: Field survey

Per cent of elderly persons associated with cultural activities in urban, rural (less Muslim) and rural (more Muslim) areas were 22.6, 12.7 and 10.2 respectively. Per cent of elderly persons associated with religious organizations/associations in urban, rural (less Muslim) and rural (more Muslim) areas were 48.4, 33.3 and 45.8 respectively. Per cent of elderly persons associated with political activities in urban, rural (less Muslim) and rural (more Muslim) areas were 29.0, 11.1 and 13.6 respectively. Elderly females (particularly elderly females in rural (more Muslim)) area were less associated in political activities than elderly males. Elderly females (particularly elderly females in rural (more Muslim)) were less associated in cultural activities, religious organizations/associations than elderly males except elderly females in urban areas.

In case of association with different activities including cultural of localities of the elderly persons, elderly males and females of urban, rural (less Muslim) areas are homogeneous,

but those of rural (more Muslim) area are not homogeneous in this respect (p-value = 0.002). Localities of residence are also homogeneous in this respect.

In case of association with any religious organizations/associations of the elderly persons, elderly males and females of rural (less Muslim) area are homogeneous, but those of urban and rural (more Muslim) areas are not homogeneous in this respect with respective p-values 0.029 and < 0.001. Localities of residence are also homogeneous in this respect.

In case of association with any political activities of the elderly persons, elderly males and females of rural (less Muslim) area are homogeneous, but those of urban and rural (more Muslim) areas are not homogeneous with respective p-values 0.076 and 0.004. Localities of residence are not homogeneous in this respect (p-value = 0.068).

Percent distribution of elderly persons in the households of Malda district with their general feelings about their feeling lonely, health etc on the basis of locality of residence and sex are presented in Table 4.25.

Table 4.25. Per cent Distribution of Elderly with Their General Feelings in Malda district

Locality of residence	Sex	General feelings								
		Loneliness	Health not good	Children not stay with them	Children not visit often	Nobody to help	Nobody to prepare food	Afraid of thieves	Not able to move around	Nobody to help when felt sick
Urban	Person	25.8	64.5	6.5	6.7	12.9	16.1	0.0	0.0	9.7
	Male	20.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
	Female	28.6	81.0	9.5	9.5	19.0	23.8	0.0	0.0	9.5
Rural (less Muslim)	Person	46.8	41.3	31.7	31.7	31.7	30.2	19.0	11.1	33.3
	Male	34.8	33.3	16.7	20.8	12.5	16.7	8.3	4.2	20.8
	Female	53.8	46.2	41.0	38.5	43.6	38.5	25.6	15.4	41.0
Rural (more Muslim)	Person	23.7	30.5	6.8	6.8	15.3	10.2	0.0	6.8	13.6
	Male	20.8	16.7	0.0	0.0	8.3	8.3	0.0	0.0	8.3
	Female	25.7	40.0	11.4	11.4	20.0	11.4	0.0	11.4	17.1

Source: Field survey

Regarding different general feelings of the elderly persons of Malda district like (a) loneliness, (b) unhealthy, (c) children not stay with them, (d) children not visit often, (e) nobody to help, (f) nobody to prepare food, (g) afraid of thieves and (h) nobody to help when felt sick; localities of residence were not homogeneous with respective p-values 0.016, < 0.001, < 0.001, < 0.001, 0.036, 0.018, < 0.001 and 0.006. Localities of residence were homogeneous regarding the feeling that not able to move around of the elderly of the Malda district.

Elderly persons of the households of Madla district expressed their views whether children were the main support for the parents at old ages and the findings of the same are presented in Table 4.26.

Table 4.26. Per cent Distribution of Elderly in Opining Children Being Main Support for Parents at Elderly Age in Malda District

Locality of residence	Children being main support at elderly age		
	Person	Male	Female
Urban	74.2	60.0	81.0
Rural (less Muslim)	39.7	30.8	45.9
Rural (more Muslim)	39.0	45.8	34.3

Source: Field survey

Regarding the opinion that children being the main support at elderly age by elderly persons of Malda district; localities of residence are not homogeneous (p-value = 0.002), but elderly males and females of all the localities of residence are homogenous in this respect.

Regarding fulfillment of expectations in life by the elderly persons, the Table 4.27 presents the degree of fulfillment of expectations in life by the elderly persons according to locality of residence and sex in Malda district.

Table 4.27. Per cent Distribution of Elderly with Degree of Fulfillment of their Expectation in Life in Malda District

Locality of residence	Sex	Less or something	Much or everything	Total
Urban	Person	71.0	29.0	100
	Male	80.0	20.0	100
	Female	66.7	33.3	100
Rural (less Muslim)	Person	73.0	27.0	100
	Male	50.0	50.0	100
	Female	89.2	10.0	100
Rural (more Muslim)	Person	86.4	13.6	100
	Male	79.2	20.8	100
	Female	91.4	8.6	100

Source: Field survey

Regarding fulfillment of expectation in life by the elderly persons, elderly males and females of urban and rural (more Muslim) areas of Malda district are homogeneous, but those of rural (less Muslim) are not homogeneous in this respect (p-value < 0.001). In rural areas, the degree of fulfillment of expectation in life by the elderly females was very less than the elderly males, but the reverse was in case of urban area because females of rural areas were less secured than those of rural areas. Localities of residence are not homogeneous in this respect (p-value = 0.020).

Binary (Binomial) logistic regression analysis is often used to deal with dichotomous dependent variable and is a reformulated multiple regression model in which the predicted variable can only take the value of one (possessing/belonging/happening) and zero (not possessing/belonging/happening). Further, the independent variables can be categorical or interval or a combination of the two. This method has been used in demographic and other types of research.

The determinants of the vital attributes for securities of elderly persons (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed of the elderly persons were studied with the help of binary logistic regression analysis. Attempts have been made to formulate some binary logistic regression equation on the basis of the survey data on the elderly persons of the sampled households of Malda district.

Odds ratio = chance of happening/chance of not happening

Chance of happening = odds ratio / (1 + odds ratio), Odds ratio lies between 0 to ∞ .

For the binary logistic regression, we have converted the categories of the categorical variables (a) 'education' into a dichotomous categorical variable having the categories (i) Less educated consists of categories illiterate, primary and (ii) Educated consists of categories secondary and above and (b) 'past occupation' into a dichotomous categorical variable having the categories (i) Less earning past occupation consists of unemployed, cultivation, labourer, priest, beggar and housewife and (ii) more earning past occupation consists of other categories of past occupation. Family size is denoted as fs.

Substituting appropriate values of independent variables (variables on right hand side of equation for odds ratio), the value of odds ratio may be calculated. After calculation of odds ratio, the chance of happening/belongingness may be calculated. If the chance of happening/belongingness be greater than or equal to 0.5, it may be said that individual belongs to the concerned category, otherwise not.

Feeling that "Health is not good" is a great source of dissatisfaction and depression of elderly persons. Table 4.28 provides the results of binary logistic regression used to assess the general feeling of the elderly persons that "Health is not good" in Malda district.

Table 4.28. Binary Logistic Regression used to Assess General Feeling of Elderly that “Health not good” in Malda District

Determinant (with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
Rural(less Muslim) (t1=1, t2=0)	-1.662	0.005	0.190	Urban
Rural(more Muslim) (t1=0, t2=1)	-2.403	<0.001	0.085	(t1=0, t2=0)
Sex (Female) (s=1)	0.643	0.352	1.902	Male (s=0)
Family size	-0.023	0.656	0.977	
Education (Less educated) (e=1)	0.858	0.175	2.359	Educated (e=0)
Past occupation (Less earning occupation) (p=1)	0.050	0.678	1.051	More earning occupation (p=0)
Age (in years)	0.142	<0.001	1.152	
Feeling nobody to help when sick(Yes) (f=1)	0.623	0.279	1.864	No (f=0)
Marital status(Not currently married) (m=1)	0.038	0.701	1.039	Currently Married (m=0)
Possessing immovable asset (No) (i=1)	0.032	0.457	1.033	Yes (i=0)
Possessing liquid asset (No) (l=1)	0.283	0.701	1.327	Yes (l=0)
Working and/or pension holder (No) (w=1)	0.046	0.531	1.047	Yes (w=0)
Constant	-5.001	0.002	0.007	
Overall percentage of correct prediction : 75.2 Nagelkerke R Square : 0.356 Hosmer and Lameshow test for goodness of fit : Good (P-value=0.323)				

Source: Field survey

In this context, significant determinants are locality of residence (Rural (less Muslim)/ Rural (more Muslim)) (negatively related) and age (positively related).

Insignificant (not prominent/important) determinants for elderly persons in this context are family size (negatively related), education (Less educated), past occupation (Less earning occupation), sex (Female), feeling nobody to help when sick (Yes), marital status (Not currently married), possessing immovable asset (No), possessing liquid asset (No), working and/or pension holder (No) (positively related).

Odds ratio for “Health not good”

$$= 0.007 \times 0.190^{t1} \times 0.085^{t2} \times 1.902^s \times 0.977^{fs} \times 2.359^e \times 1.051^p \times 1.152^{age} \times 1.864^f \times 1.039^m \times 1.033^i \times 1.327^l \times 1.047^w$$

Being a head of household is an indication of satisfaction of the elderly persons living in the household. Table 4.29 provides the results of binary logistic regression to determine whether the elderly persons being “Head of household” in Malda district. In this context, significant determinants are locality of residence (Rural (less Muslim)/ Rural (more Muslim)), sex (Male), working and/or pension holder (Yes) (positively related) and age (negatively related). Insignificant (not prominent/important) determinants for elderly in this context are family size (negatively related), education (Educated), past occupation (More earning occupation), marital status (Currently married), possessing immovable asset (Yes), liquid asset (Yes) (positively related).

Table 4.29. Binary Logistic Regression used to Determine Whether Elderly being “Head of household” in Malda District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a)Rural(less Muslim)(t1=1,t2=0)	1.678	0.048	5.355	Urban Area (t1=0, t2=0)
(b)Rural(more Muslim)(t1=0,t2=1)	1.567	0.042	4.792	
Sex (Male) (s=1)	3.690	<0.001	40.042	Female (s=0)
Family size	-0.234	0.260	0.791	
Education (Educated) (e=1)	0.213	0.678	1.237	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.923	0.434	2.517	Less earning occupation (p=0)
Age (in years)	-0.154	0.018	0.857	
Marital Status(Currently married) (m=1)	0.069	0.662	1.071	Not currently married (m=0)
Possessing immovable asset(Yes)(i=1)	2.756	0.174	15.740	No (i=0)
Possessing liquid asset(Yes)(l=1)	0.167	0.421	1.182	No (l=0)
Working and/or pension holder(Yes) (w=1)	2.732	<0.001	15.366	No (w=0)
Constant	5.758	0.215	316.677	
Overall percentage of correct prediction : 90.2 Nagelkerke R Square : 0.769 Hosmer and Lameshow test for goodness of fit : Good (P-value=0.868)				

Source: Field survey

Odds ratio for ‘Head of household’

$$= 316.677 \times 5.355^{t1} \times 4.792^{t2} \times 40.042^s \times 0.791^{fs} \times 1.237^e \times 2.517^p \times 0.857^{age} \times 1.071^m \times 15.740^i \times 1.182^l \times 15.366^w$$

Involvement of the elderly person in the household activities is a prominent indicator for their satisfactions. Table 4.30 provides the results of binary logistic regression to determine whether the elderly person being “Involved in day-to-day purchases of household and other activities of household” in Malda district. In this context, significant determinants are locality of residence (Rural (less Muslim)/ Rural (more Muslim)), sex (Male), working and/or pension holder (Yes) (positively related) and age (negatively related). Insignificant (not prominent/important) determinants for elderly in this context are family size (negatively related), education (Educated), past occupation (More earning occupation), marital status (Currently married), possessing immovable asset (Yes), possessing liquid asset (Yes), health not good (No) (positively related).

Table 4.30. Binary Logistic Regression used to Determine Whether Elderly being “Involved in day-to-day purchase & other activities of household” in Malda District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
Rural (less Muslim)(t1=1, t2=0)	2.691	0.016	14.750	Urban Area (t1=0, t2=0)
Rural (more Muslim)(t1=0,t2=1)	2.296	0.046	9.934	
Sex (Male)(s=1)	3.309	<0.001	27.368	Female(s=1)
Family size	-0.183	0.422	0.833	
Education (Educated) (e=1)	0.201	0.677	1.223	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.757	0.457	2.132	Less earning occupation (p=0)
Age (in years)	-0.170	0.014	0.844	
Marital status (Currently married)(m=1)	0.048	0.421	1.049	Not currently married(m=0)
Possessing immovable asset (Yes)(i=1)	2.643	0.179	14.058	No(i=0)
Possessing liquid asset (Yes)(l=1)	0.119	0.210	1.126	No(l=0)
Working and/or pension holder (Yes)(w=1)	2.470	<0.001	11.827	No(w=0)
Health not good (No)(h=1)	0.174	0.699	1.190	Yes(h=0)
Constant	4.591	0.087	98.593	
Overall percentage of correct prediction : 90.4 Nagelkerke R Square : 0.776 Hosmer and Lameshow test for goodness of fit : Good (P-value= 0.557)				

Source: Field survey

Odds ratio for ‘Involved in day-to-day purchase & other activities of household’
 $= 98.593 \times 14.750^{t1} \times 9.934^{t2} \times 27.368^s \times 0.833^{fs} \times 1.223^e \times 2.132^p \times 0.844^{age} \times 1.049^m \times 14.058^i \times 1.126^l \times 11.827^w \times 1.190^h$

Another involvement of the elderly person in the household activities is their involvement in big purchases like land, house, car etc of the household Table 4.31 provides the results of binary logistic regression to determine whether the elderly person being “Involved in big purchase like land, house, car etc of household” in Malda district. In this context, significant determinants are locality of residence (Rural (less Muslim)/ Rural (more Muslim)), sex (Male), working and/or pension holder (Yes) (positively related) and age (negatively related). Insignificant (not prominent/important) determinants for elderly persons in this context are family size (negatively related), education (Educated), past occupation (More earning occupation), marital status (Currently married), possessing immovable asset (Yes), possessing liquid asset (Yes), health not good (No) (positively related).

Table 4.31. Binary Logistic Regression used to Determine Whether Elderly being “Involved in big purchase like land, house, car etc of household” in Malda District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
Rural (less Muslim)(t1=1,t2=0)	1.558	0.049	4.749	Urban Area (t1=0,t2=0)
Rural (more Muslim)(t1=0,t2=1)	1.509	0.046	4.522	
Sex (Male)(s=1)	2.634	0.003	13.934	Female(s=0)
Family size	-0.254	0.192	0.776	
Education (Educated) (e=1)	0.168	0.254	1.829	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.690	0.467	1.994	Less earning occupation (p=0)
Age (in years)	-0.115	0.044	0.892	
Marital status (Currently married)(m=1)	0.052	0.355	1.053	Not currently married(m=0)
Possessing immovable asset (Yes)(i=1)	1.979	0.219	7.237	No(i=0)
Possessing liquid asset (Yes)(l=1)	0.321	0.456	1.379	No(l=0)
Working and/or pension holder (Yes)(w=1)	2.045	0.002	7.728	No(w=0)
Health not good (No)(h=1)	0.089	0.391	1.093	Yes(h=0)
Constant	4.144	0.317	63.023	
Overall percentage of correct prediction : 89.0 Nagelkerke R Square : 0.697 Hosmer and Lameshow test for goodness of fit : Good (P-Value=0.129)				

Source: Field survey

Odds ratio for ‘Involved in big purchase like land, house, car etc of household’

$$= 63.023 \times 4.749^{t1} \times 4.522^{t2} \times 13.934^s \times 0.776^{fs} \times 1.829^e \times 1.994^p \times 0.892^{age} \times 1.053^m \times 7.237^i \times 1.379^l \times 7.728^w \times 1.093^h$$

Involvement in decision-making in the household of the elderly persons is also a major source of satisfactions of the elderly. Table 4.32 provides the results of binary logistic regression to determine whether the elderly person being “Involved in decision-making activities of household” in Malda district. In this context, significant determinants are locality of residence (Rural (less Muslim)/ Rural (more Muslim)), sex (Male), working and/or pension holder (Yes) (positively related) and age (negatively related); Insignificant (not prominent/important) determinants for elderly persons in this context are family size (negatively related), education (Educated), past occupation (More earning occupation), marital status (Currently married), possessing immovable asset (Yes), possessing liquid asset (Yes), health not good (No) (positively related).

Table 4.32. Binary Logistic Regression used to Determine Whether Elderly being “Involved in decision-making activities of household” in Malda District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
Rural (less Muslim)(t1=1,t2=0)	1.526	0.029	4.598	Urban Area (t1=0,t2=0)
(b) Rural (more Muslim)(t1=0,t2=1)	1.352	0.048	3.867	
Sex (Male)(s=1)	2.365	0.004	10.648	Female(s=0)
Family size	-0.053	0.678	0.951	
Education (Educated) (e=1)	0.021	0.689	1.021	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.546	0.548	1.726	Less earning occupation (p=0)
Age (in years)	-0.122	0.009	0.885	
Marital status (Currently married)(m=1)	0.045	0.378	1.046	Not currently married(m=0)
Possessing immovable asset (Yes)(i=1)	0.669	0.525	1.953	No(i=0)
Possessing liquid asset (Yes)(l=1)	0.082	0.322	1.085	No(l=0)
Working and/or pension holder (Yes)(w=1)	2.121	0.002	8.335	No(w=0)
Health not good (No)(h=1)	0.051	0.425	1.052	Yes(h=0)
Constant	5.235	0.181	187.729	
Overall percentage of correct prediction : 85.1 Nagelkerke R Square : 0.563 Hosmer and Lameshow test for goodness of fit : Good (P-Value=0.297)				

Source: Field survey

Odds ratio for ‘Involved in decision-making activities of household’

$$= 187.729 \times 4.598^{t1} \times 3.867^{t2} \times 10.648^s \times 0.951^{fs} \times 1.021^e \times 1.726^p \times 0.885^{age} \times 1.046^m \times 1.953^i \times 1.085^l \times 8.335^w \times 1.052^h$$

Feeling depressed by the elderly persons is a great dissatisfaction among them. Table 4.33 provides the results of binary logistic regression to determine whether the elderly person “Feeling depressed” in Malda district. In this context, significant determinants are locality of residence (Rural (Less Muslim)/ Rural (More Muslim)), past occupation (Less earning occupation), age, possessing immovable asset (No), health not good (Yes) (positively related), family size (negatively related); Insignificant (not prominent/important) determinants for elderly in this context are education (Less educated), past occupation (Less earning occupation), sex (Female), marital status (Not currently married), possessing liquid asset (Yes), working and/or pension holder (Yes) (positively related).

Table 4.33. Binary Logistic Regression used to Determine Whether Elderly “Feeling depressed” in Malda District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a) Rural (less Muslim)(t1=1,t2=0)	1.164	0.048	3.203	Urban Area (t1=0, t2=0)
(b) Rural (more Muslim)(t1=0,t2=0)	1.499	0.042	4.477	
Sex (Female)(s=1)	0.354	0.546	1.425	Male(s=0)
Family size	-0.271	0.041	0.762	
Education (Less educated) (e=1)	0.482	0.447	1.619	Educated (e=0)
Past occupation (Less earning occupation) (p=1)	1.285	0.049	3.614	More earning occupation (p=0)
Age (in years)	0.151	0.003	1.163	
Marital status (Not currently married)(m=1)	0.412	0.422	1.510	Currently married (m=0)
Possessing immovable asset (No)(i=1)	1.411	0.049	4.100	Yes(i=0)
Possessing liquid asset (Yes)(l=1)	1.001	0.311	2.721	Yes(l=0)
Working and/or pension holder (Yes)(w=1)	0.043	0.116	1.044	Yes(w=0)
Health not good (Yes)(h=1)	2.107	<0.001	8.222	No(h=0)
Constant	-3.004	0.369	0.050	
Overall percentage of correct prediction : 78.4 Nagelkerke R Square : 0.536 Hosmer and Lameshow test for goodness of fit : Good (P-Value=0.734)				

Source: Field survey

Odds ratio for ‘Feeling depressed’

$$= 0.050 \times 3.203^{t1} \times 4.477^{t2} \times 1.425^s \times 0.762^{fs} \times 1.619^e \times 3.614^p \times 1.163^{age} \times 1.510^m \times 4.100^i \times 2.751^l \times 1.019^w \times 8.381^h$$

To assess life satisfaction of the elderly persons, following 11 questions (mentioned in Table No. 4.34 below) with 3-point rating (agree-3/uncertain-2/disagree-1) were asked to the sampled elderly persons. Dimension reduction: Factor Analysis coupled with Reliability Analysis techniques were employed to the questions. Factor Analysis aims at grouping the original (independent) variables into a fewer factors (latent variables or constructs) which underlie the strongly related input variables. Reliability Analysis aims at whether the construction of factors (latent variables) with some input variables is ‘reliable’ meaning the factor will produce the same results each time it is administered to the same person in the same setting.

Researchers use factor analysis first to organize the items (variables) into constructs and then reliability analysis to determine how well each construct holds together. There are two kinds of factor analysis: Exploratory Factor Analysis and Confirmatory Factor Analysis. Exploratory Factor Analysis (EFA) allows researchers to see which items should be grouped together based on statistical similarity; Confirmatory Factor Analysis (CFA) allows researchers to test pre-existing factor models to see how

the model fits data. In our study, Exploratory Factor Analysis has been used. The correlation matrix is the starting point of any factor analysis. 'Principal Component Analysis' (PCA) is used for extracting different factors from the data and 'Varimax' method is used for rotating factors to create maximum similarity among the strongly correlated variables within each factor and maximum distance between each of the factors. Kaiser-Mayer-Olkin (KMO) is a measure of whether the distribution of values is adequate for conducting factor analysis. Kaiser himself designated this 'KMO Measure of Sampling Adequacy' levels as follows: A measure > 0.9 is marvelous, > 0.8 is meritorious, > 0.7 is middling, > 0.6 is mediocre, > 0.5 is miserable and < 0.5 is unacceptable. 'Bartlett Test of Sphericity' is used to test whether the correlation matrix is an identity matrix (factor analysis would be meaningless with an identity matrix). A significance value < 0.05 indicates that data do not produce an identity matrix.

In reliability analysis, Cronbach's Alpha (α) is designed as a measure of internal consistency. A rule of thumb that applies to most situations is as > 0.9 as excellent, > 0.8 as good, > 0.7 as questionable, > 0.5 as poor and < 0.5 as unacceptable.

Table 4.34 provides two components (factors or latent variables): 'Perceived goodness of elderly age' and 'Perceived hardship of elderly age' were generated along with associated questions and their loadings and per cent of variance explained by the factors in Malda district. Overall satisfaction of individual elderly may be assessed through only two generated factors using appropriate values of original variables. These two factors for measuring life satisfaction may be correlated and regressed to other variables of the elderly like sex, marital status, living arrangement, being head of the household, presently working and/or pension holder, possession of immovable and liquid assets, health condition, involvements in household activities etc.

Table 4.34. Two Components (Factors) Generated along with Associated Questions and Their Loadings and Percent of Variance Explained by Factors in Malda District

Factor No.	Name of factor	Variable (Question)	Average	Loading	% of Variance explained	Reliability (Cronbach's α)
1	Perceived goodness of elderly age(F ₁)	As you grow older, things seem to better than before(X ₁)	1.49	0.841	47.07	0.821 (Good)
		Old age is the most pleasant time of your life(X ₂)	1.50	0.858		
		You are just as happy as when you were younger(X ₃)	1.48	0.877		
		You expect some pleasant and interesting things to happen to you in coming years(X ₄)	1.47	0.743		
		You feel old and somewhat tired(X ₅)	2.56	-0.581		
		As you look back on your life, you feel satisfied and happy(X ₆)	1.51	0.780		
		You have made plans for things you will be doing in a month or year(X ₇)	1.35	0.809		
		You may get scope to do your unfinished works(X ₈)	1.35	0.666		
2	Perceived hardship of elderly age(F ₂)	Most of the things you do are boring and monotonous(X ₉)	2.33	0.686	23.00	0.751 (Acceptable)
		Compared to other people, you get disappointments too often(X ₁₀)	2.39	0.726		
		In spite of what some people say, lot of average men are getting worse, not better(X ₁₁)	2.54	0.827		
% of Total variance explained by Factor Analysis			70.07			
KMO Measure of Sampling Adequacy			0.906 (Marvelous)			
Bartlet's Test of Sphericity Approx. χ^2			1459.705			
df			55			
p-value			< 0.001			

Source: Field survey

Equations of factors in terms of original variables are given below:

$$F_1 = 0.841 X_1 + 0.858 X_2 + 0.877 X_3 + 0.743X_4 - 0.581X_5 + 0.780X_6 + 0.809X_7 + 0.666X_8$$

$$F_2 = 0.686 X_9 + 0.726 X_{10} + 0.827 X_{11}$$

4.6 Summary

Attempts have been made in this chapter to study and compare the magnitude of population ageing and its trends and different factors relating to population ageing like sex ratio, marital status, living arrangement etc among two distinct religious communities Muslim and non-Muslim of Malda district based on secondary (census) and primary data.

On the basis of secondary data from Census of India and other sources in India, West Bengal and Malda district and primary data from Malda district, following conclusions may be made:

- (i) Per cent of elderly persons to total population was the lowest in Muslim population among all the per cents of elderly persons to total population over different categories of religion, place, locality of residence, sex, caste etc. Per cent of persons in the age group 0-14 years was higher among Muslims than Hindus indicating higher birth rates among Muslims than Hindus, per cent of persons in the age group 15-59 years (normal working age group) was lower among Muslims than Hindus indicating lesser work participation among Muslims than Hindus, per cent of persons of oldest-old (aged 80+) was lower among Muslims than that among Hindus indicating Muslims are living lesser years than Hindus and sex ratio of elderly persons among Muslims was lower than that among Hindus indicating that the per cent of lesser elderly females among Muslims was lesser than that among Hindus,
- (ii) Literacy rate, work participation among Muslim community were lowest among those of other religious communities and work participation among Muslim elderly females was very low compared that among Hindu elderly females in India, West Bengal and Malda district. Per cent decadal growth rate of literacy among Muslim community was lesser than that among Hindu community; again it was least among Muslim community in West Bengal.
- (iii) In both rural and urban areas, per cent of households without any elderly family member in Malda district was higher than those of India and West Bengal, that is because Malda district is Muslim dominated one and its per cent of elderly persons is lesser than those of India and West Bengal.
- (iv) Per cent of households having elderly head in Malda district was less than those in India and West Bengal.
- (v) Disabilities due to vision and movement were more serious problems for the elderly persons in both rural and urban areas of Malda district. These disabilities were more acute in Malda district than West Bengal as a whole.
- (vi) In Malda district, elderly persons of rural (more Muslim) area were more dependent; having less dependants; less being head of household; less involved in day-to-day purchases and other activities, big purchases; decision-making of family; having more immovable property, liquid asset; and less presently working and/or pension holders than those of elderly person of rural (less Muslim) area.
- (vii) In Malda district, elderly in rural (more Muslim) area were in the worst conditions among others in respects of capable of spending money for buying, getting sufficient food and clothes and getting sufficient medicines and health care. Reason behind the same is that the economic condition of Muslims are worst compared to others.

(viii) In Malda district, per cent of elderly persons physically mobile was least in rural (more Muslim) area than those in other areas.

(ix) In Malda district, per cent of elderly persons associated with cultural activities and political activities was least in rural (more Muslim) area than those in other areas.

The above backgrounds forms the reasons the gaps of socio-economic and cultural development between Muslims and non-Muslims in India and in Malda district. There is inertia on growth and development of Muslim community in India because of lowest literacy rate, work participation, socio- economic and cultural conditions and attitude toward family planning etc among Muslim community in India. One cannot simply plan for reducing the gaps between elderly persons belonging to Muslim and non-Muslim communities, that is, for improving socio-economic status of elderly persons belonging to Muslim community. As change agents for individuals and organizations need to come out with programmes, planning and new initiatives that will cater to the growth and development of Muslim community to (a) mobilize and build awareness on their rights, welfare programmes and schemes not only for elderly persons belonging to Muslim community, but also for the total population belonging to Muslim community, (b) provide proper education to the children belonging to Muslim community and motivate young group belonging to Muslim community towards family planning so that there would be control on birth rate and socio-economic and cultural upliftment takes place among Muslim community because children and young group of today would become elderly persons in future. We have to keep in mind that the proper growth and development of a secular country like India is not possible, if a big share of population namely Muslims of India is lagging behind compared to that of non-Muslims of India.

Attempts have been made to develop binary logistic regression equations of attributes of the elderly persons determining the well-being of the elderly persons in Malda district (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed were performed.

In assessing life satisfaction of the elderly persons, 11 questions (mentioned earlier) with 3-point rating (agree-3/uncertain-2/disagree-1) using factor analysis coupled with reliability analysis, two factors (latent variables): (a) perceived goodness of elderly age, (b) perceived hardship of elderly age were derived.

CHAPTER 5

NATURE AND PATTERN OF POPULATION AGEING AMONG SCHEDULED TRIBES (ST) AND NON-SCHEDULED TRIBES POPULATION IN INDIA, WEST BENGAL AND JALPAIGURI DISTRICT

5.1 Introduction

The objective of present chapter is to assess and compare the situations of population ageing and social security of the elderly persons among Scheduled tribes (ST) with non-Scheduled tribes (non-ST) in West Bengal and Jalpaiguri district (a district in top position with respect to per cent of ST in West Bengal). Here, by 'Non-ST', we like to mean population other than ST population. Indian tribals are a heterogeneous group; most of them stay at the lowest stratum of the society due to various factors like geographical and cultural isolation, low level literacy, primitive and seasonal occupations and extreme level of poverty. They are ignorant, gullible and unaware of the day-to-day happenings not being assertive to grasp the opportunities that are offered by the Government; avoid assimilation and joining the mainstream of society. They are not capable of providing education to their children and are not able to avail modern medical and health care facilities. They are facing lot of problems than non-tribes. According to Census of India, 2011 in West Bengal, per cent of ST to total population in Jalpaiguri district is 18.9 followed by Puruliya district with 18.5 per cent ST population to total population; districts Kolkata, Haora, Midnapore (E) and Coochbehar are four districts with low per cent of ST population having 0.2, 0.3, 0.5 and 0.6 per cent ST population of their total populations respectively. According to Census of India, 2011, per cent literacy rate and per cent work participation of ST population of all ages in India were 49.5 and 45.4 respectively.

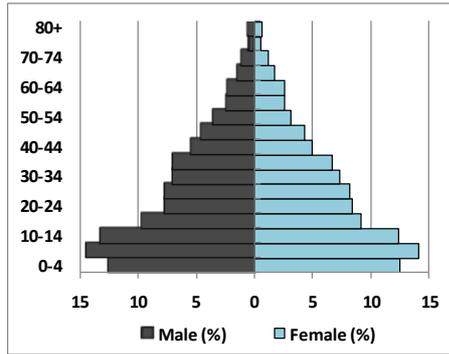
5.2 Data and Methodology

For collecting secondary data for Jalpaiguri district from censuses of India, we have collected data related to ST and non-ST populations. Secondary data relating to population ageing of this district (Census of India 2001 and 2011) were collected and have been presented here. According to Census of India, 2011, in Jalpaiguri district, (a) percentages of total populations in rural and urban areas were 72.6 and 27.4 respectively and (b) percentages of elderly populations in rural and urban areas were 67.8 and 32.2

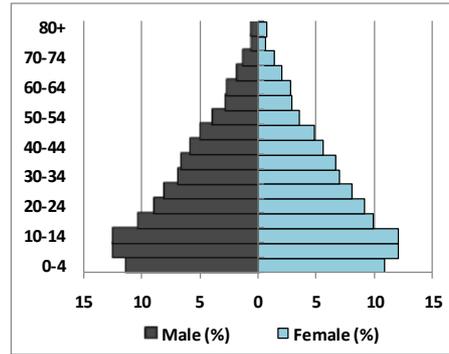
respectively. Primary data were collected following the sampling methods as follows. One town 'Jalpaiguri' was selected at random from the towns of Jalpaiguri district. One ward out of the wards of the selected town was selected at random. Again for collecting data from rural areas of Jalpaiguri district, block with at least 40, at most 10 per cent ST of total population were treated purposively by us as 'rural (more ST)' and rural (less ST) respectively. One block 'Nagrakata' with 49.2 per cent ST population and another block 'Maynaguri' with 1.3 per cent ST population were selected at random (Block (Panchayat Samity) wise per cent of ST to total population in Jalpaiguri district for census 2001 and 2011 given in Appendix-C.2). From each of those two selected blocks, two villages were selected at random. At the last stage, from each of selected ward and villages, 25 households having at least one elderly person were selected at random. There were two types of questionnaire: 'Household Questionnaire' for collecting data related to household details and 'Elderly Persons Questionnaire' for collecting data from each elderly person of the household. Then for collecting primary data from Jalpaiguri district, three defined localities of residence, namely, urban, rural (less ST) and rural (more ST) with 25, 50 and 50 sampled households were taken respectively. According to Census of India, 2011, about 75 per cent of households do not have elderly family members, therefore considering the proportions of population in rural and urban areas of Jalpaiguri district, taking sample sizes 100 from rural and 25 from urban areas, that is the ratio of sample sizes from rural and urban areas in the ratio 4:1 (proportional allocation) may be justified. Again, taking sample size more than 25 from each sampled village/ward may or may not be possible.

5.3 Age-sex Distribution of Total Population in India, West Bengal and Jalpaiguri District

Age-sex distribution of total population in India, West Bengal and Jalpaiguri district has been presented through the following population pyramids (Figures 5.1- 5.9). The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an increase in the proportion of elderly population. Shapes of population pyramids in case of non-ST and ST populations are shrunken base and broad base respectively indicates that the rate of ageing in Non-ST population is higher than that in ST.

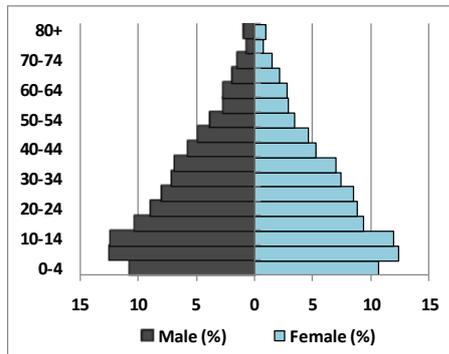


India(ST): 2001

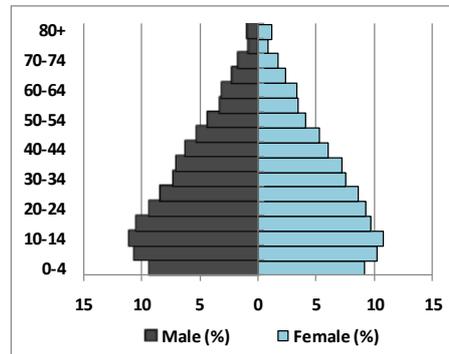


India(ST): 2011

Figure 5.1: Population Pyramids for India (ST) for 2001 and 2011

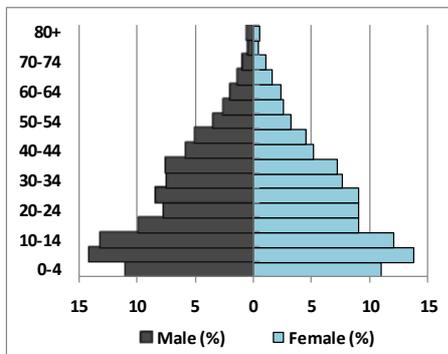


India(Non-ST): 2001

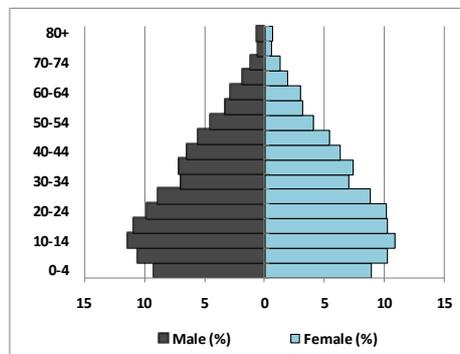


India(Non-ST): 2011

Figure 5.2: Population Pyramids for India (Non-ST) for 2001 and 2011

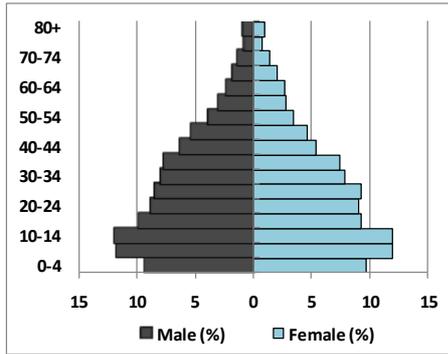


West Bengal(ST): 2001

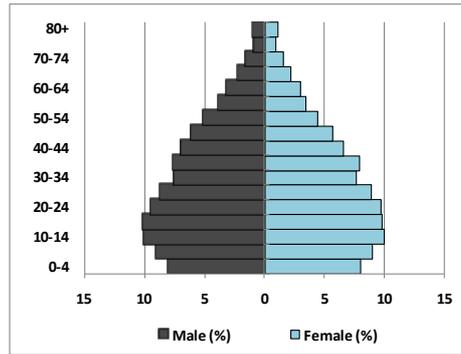


West Bengal (ST): 2011

Figure 5.3: Population Pyramids for West Bengal (ST) for 2001 and 2011

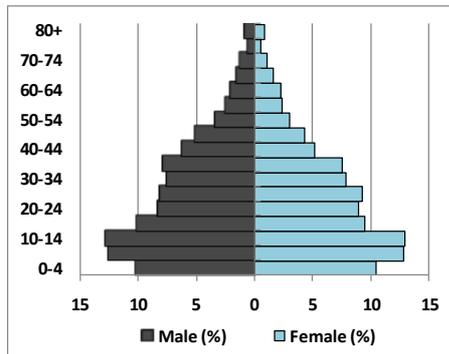


West Bengal(Non-ST): 2001

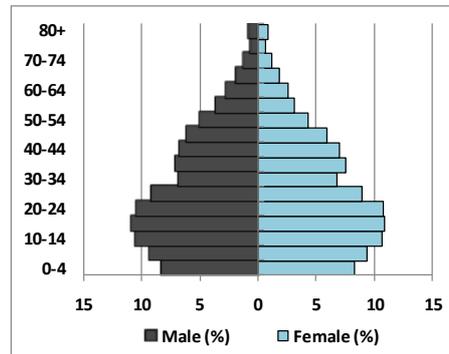


West Bengal(Non-ST): 2011

Figure 5.4: Population Pyramids for West Bengal (Non-ST) for 2001 and 2011

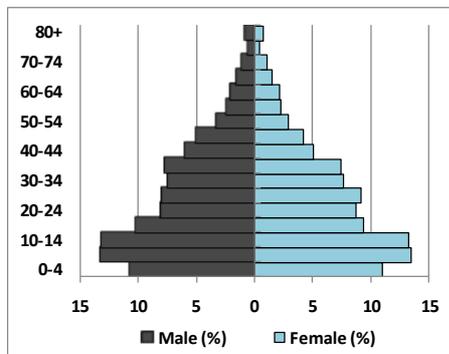


Jalpaiguri (Total): 2001

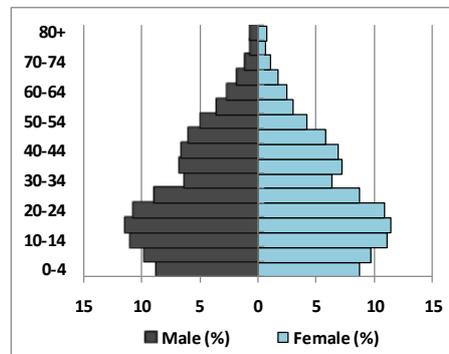


Jalpaiguri (Total): 2011

Figure 5.5: Population Pyramids for Jalpaiguri district (Total) for 2001 and 2011

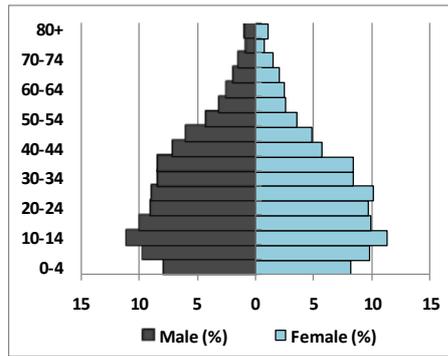


Jalpaiguri (Rural): 2001

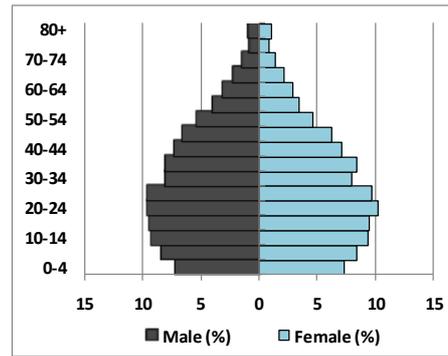


Jalpaiguri (Rural): 2011

Figure 5.6: Population Pyramids for Jalpaiguri district (Rural) for 2001 and 2011

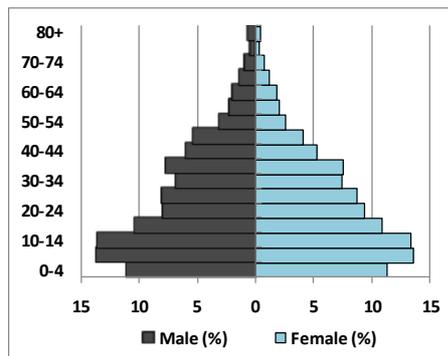


Jalpaiguri (Urban): 2001

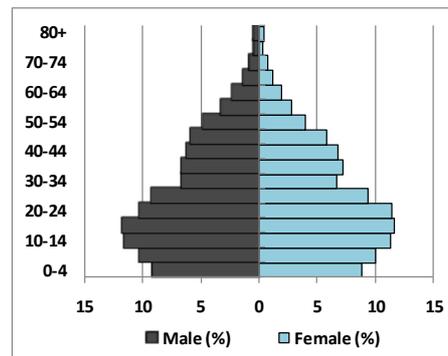


Jalpaiguri (Urban): 2011

Figure 5.7: Population Pyramids for Jalpaiguri district (Urban) for 2001 and 2011

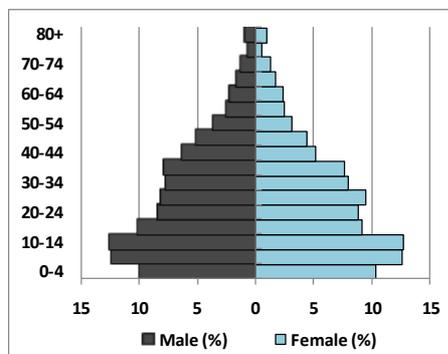


Jalpaiguri (ST): 2001

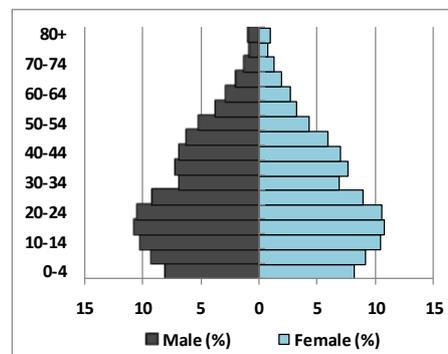


Jalpaiguri (ST): 2011

Figure 5.8: Population Pyramids for Jalpaiguri district (ST) for 2001 and 2011



Jalpaiguri (Non-ST): 2001



Jalpaiguri (Non-ST): 2011

Figure 5.9: Population Pyramids for Jalpaiguri district (Non-ST) for 2001 and 2011

5.4 Ageing in Jalpaiguri District Compared to West Bengal and India

Per cent distribution of population by age groups according to census 2001 and 2011 along with per cent decadal growth rate of elderly persons in general and elderly population over 2001–11 among ST and non-ST populations in India, West Bengal and Jalpaiguri district according to censuses 2001 and 2011 is provided in Table 5.1. For ST and non-ST populations, per cent of population aged 0–14 years decreased over 2001–2011, but there were increasing trends in per cent of population for other age-groups. Per

cent decadal growth rate of elderly persons in total population over 2001-2011 in ST population was higher than that in case of non-ST population in India and West Bengal; but reverse was in case of Jalpaiguri district. Per cent decadal growth rate of elderly persons in total population over 2001-2011 in non-ST population was almost twice of the same in case of ST population. Percentages of elderly females were higher than those of elderly males among both ST and non-ST populations in India, West Bengal and Jalpaiguri district except ST population in Jalpaiguri district. Among ST populations, per cent of elderly of was remarkably low in Jalpaiguri district compared to those in India and West Bengal. ST populations in India and Jalpaiguri district were youthful, but Non-ST populations in India, West Bengal and Jalpaiguri were mature.

Table 5.1. Per cent Distribution of Elderly Population by Age Groups According to Census 2001 and 2011 among ST and Non-ST Populations in India, West Bengal and Jalpaiguri District

			Age groups (years)							
			0 - 14		15 - 59		60 + (Per cent of elderly)		Per Cent Decadal growth rate of elderly in general population 2001 - 11	Per Cent Decadal growth rate of elderly in elderly population 2001 - 11
			2001	2011	2001	2011	2001	2011		
India	ST	Person	39.4	35.5	54.5	57.6	6.1	6.9	10.2	40.3
		Male	40.0	36.1	54.3	57.4	5.7	6.5	9.7	39.5
		Female	38.9	35.0	54.6	57.7	6.5	7.3	10.7	41.0
	Non-ST	Person	35.0	30.5	57.4	60.8	7.6	8.7	15.5	35.2
		Male	35.1	31.0	57.5	61.0	7.2	8.0	15.2	34.9
		Female	34.7	30.0	57.3	61.0	8.0	9.0	15.9	35.5
West Bengal	ST	Person	37.4	30.4	57.2	62.6	5.4	7.0	14.6	54.2
		Male	38.1	30.8	56.9	62.7	5.0	6.5	14.6	55.9
		Female	36.8	30.0	57.3	62.6	5.9	7.4	14.5	52.7
	Non-ST	Person	33.0	27.0	59.8	64.4	7.2	8.6	18.7	35.0
		Male	32.6	26.9	60.6	64.8	6.8	8.3	20.4	37.5
		Female	33.6	27.0	58.8	64.2	7.6	8.8	17.2	32.6
Jalpaiguri	ST	Person	38.0	30.5	57.3	64.7	4.7	4.8	5.9	17.7
		Male	38.0	30.8	56.9	64.0	5.1	5.2	6.2	15.8
		Female	38.1	30.1	57.6	65.4	4.3	4.5	5.6	19.9
	Non-ST	Person	35.2	27.5	58.4	65.1	6.4	7.4	14.5	31.3
		Male	34.8	27.3	59.0	65.4	6.2	7.3	15.4	33.0
		Female	35.7	27.7	57.8	64.9	6.5	7.4	13.5	29.6

Source: Censuses of India, 2001 and 2011 (Percentages were computed by researcher)

Per cent of elderly persons in different elderly age-groups among ST and non-ST populations in India, West Bengal and Jalpaiguri district is provided in Table 5.2. It was noticeable that in India, West Bengal and Jalpaiguri district; (a) per cent distribution of elderly persons was not homogeneous among ST and non-ST populations, per cent of

elderly in non-ST population was higher than that in ST population, (b) per cent of elderly female was higher than that of male except in ST population in Jalpaiguri district. It is also noticeable than per cent of elderly persons of oldest-old age group among non-ST population of India and West Bengal and Jalpaiguri district were around 1.0, but those among ST population were around 0.5.

Table 5.2. Per cent of Elderly in Different Elderly Age-groups among ST and Non-ST populations in India, West Bengal and Jalpaiguri District

			60-64	65-69	70-74	75-79	80+	60+
India	ST	Person	2.7	1.8	1.2	0.5	0.6	6.9
		Male	2.6	1.7	1.2	0.5	0.6	6.5
		Female	2.8	2.0	1.3	0.6	0.7	7.3
	Non-ST	Person	3.2	2.2	1.6	0.8	1.0	8.7
		Male	3.0	2.1	1.6	0.7	0.9	8.0
		Female	3.3	2.3	1.7	0.8	1.1	9.0
West Bengal	ST	Person	2.8	1.8	1.2	0.5	0.6	7.0
		Male	2.7	1.7	1.1	0.5	0.5	6.5
		Female	3.0	1.9	1.3	0.6	0.7	7.4
	Non-ST	Person	3.0	2.2	1.5	0.8	1.0	8.6
		Male	3.0	2.1	1.5	0.8	0.9	8.3
		Female	3.0	2.2	1.6	0.9	1.1	8.8
Jalpaiguri	ST	Person	2.1	1.3	0.7	0.4	0.4	4.8
		Male	2.3	1.3	0.8	0.4	0.4	5.2
		Female	1.9	1.2	0.7	0.3	0.4	4.5
	Non-ST	Person	2.7	1.9	1.2	0.7	0.8	7.4
		Male	2.8	1.9	1.2	0.7	0.8	7.3
		Female	2.7	1.9	1.3	0.7	0.9	7.4

Source: Census of India, 2011 (Percentages were computed by researcher)

Sex ratio of elderly persons and general population among ST and non-ST populations in India, West Bengal and Jalpaiguri district according to census 2011 is provided in Table 5.3. It was observed that in India and West Bengal (a) sex ratios of elderly persons and general population of ST population were higher than those of non-ST community and (b) in both ST and non-ST populations, (1) sex ratio of elderly persons was higher than that of general population, (2) sex ratio of general population was less than 1000 and (3) sex ratio of elderly persons mostly was greater than 1000. In case of Jalpaiguri district, most of sex ratios for elderly persons and general population were lesser than 1000 and sex ratio of elderly population of ST population were lesser than those for non-ST population. It may be inferred that proportions of females in all ages and elderly age-groups among ST population were higher than those among non-ST population, with exceptions that reverse situation hold for elderly age groups among ST population in Jalpaiguri.

Table 5.3. Sex ratio of Elderly and General Population in India, West Bengal and Jalpaiguri District

		60-64	65-69	70-74	75-79	80+	60+	All ages
India	ST	1087	1151	1098	1195	1156	1120	990
	Non-ST	1008	1036	983	1048	1135	1027	938
West Bengal	ST	1074	1144	1190	1198	1190	1130	999
	Non-ST	945	994	1017	1048	1173	1005	947
Jalpaiguri	ST	857	892	866	837	840	864	1000
	Non-ST	913	951	976	964	1042	952	942

Source: Census of India, 2011 (Sex ratios were computed by researcher)

Per cent distribution of households with number of elderly in Jalpaiguri district according to Census of India, 2011 is provided in Table 5.4. More than 70 per cent households in Jalpaiguri district did not have any elderly member in the household. Number of households not having any elderly family members in Jalpaiguri district was more than those in India and West Bengal, less than that in Malda district. It may be inferred that occurrence of population ageing in Jalpaiguri district was lesser than that in India and West Bengal, but higher than that in Malda district.

Table 5.4. Per cent Distribution of Households with Number of Elderly in Jalpaiguri District

Number of elderly in household	Total	Rural	Urban
None	74.3	75.6	71.1
1	20.8	20.0	22.9
2	4.7	4.3	5.8
3	0.2	0.1	0.2
4	0.0	0.0	0.0

Source: Census of India, 2011 (Percentages were computed by researcher)

Per cent distribution of households having elderly head by locality of residence and sex in Jalpaiguri district according to Census of India, 2011 is provided in Table 5.5. Since elderly females were expected to live more years than elderly males, percentages of elderly female heads were almost twice of that of elderly male heads in both rural and urban areas of India, West Bengal, Jalpaiguri district. Per cent of households in Jalpaiguri district were having elderly heads was 17.8.

Table 5.5. Per cent Distribution of Households Having Elderly Head by Locality of Residence and Sex in Jalpaiguri District

Locality of residence	Sex of elderly head		
	Person	Male	Female
Total	17.8	15.7	30.4
Rural	16.2	14.5	26.8
Urban	21.9	19.0	38.5

Source: Census of India, 2011 (Percentages were computed by researcher)

Per cent of households having elderly head in urban area was more than that of rural area of Jalpaiguri district.

As per Census of India, 2011 in India, West Bengal and Jalpaiguri district, per cent of working elderly persons (main worker + marginal worker) among ST and non-ST populations is provided in Table 5.6. In case of ST population, per cent of elderly working was least in Jalpaiguri district compared to India and West Bengal; but in case of non-ST population, per cent of elderly working was least in West Bengal compared to India and Jalpaiguri district. Percentages of elderly working among non-ST population were lesser than those among ST population, but the reverse were in case of Jalpaiguri district.

Table 5.6. Per cent of Working Elderly among ST and Non-ST populations in India, West Bengal and Jalpaiguri District according to Sex

	ST			Non-ST		
	Person	Male	Female	Person	Male	Female
India	54.4	68.8	41.6	40.6	59.8	22.0
West Bengal	38.5	54.2	24.6	31.0	51.4	10.7
Jalpaiguri	34.6	46.4	21.0	37.8	59.0	15.5

Source: Census of India, 2011 (percentages were computed by researcher)

As per Census of India, 2011 in India, West Bengal and Jalpaiguri district, per cent of currently married elderly persons among ST and non-ST populations is provided in Table 5.7. In case of ST population, per cent of currently married elderly persons was least in Jalpaiguri district; but in case of Non-ST population, per cent of currently married elderly persons was homogeneous in India, West Bengal and Jalpaiguri district. In both ST and Non-ST populations, per cent of currently married elderly males was almost twice that of currently married elderly females. Percentages of currently married elderly persons among non-ST population were higher than those among ST population in India, West Bengal and Jalpaiguri district. Percentages of currently married elderly persons among both ST and non-ST populations of Jalpaiguri were lesser than those in India, West Bengal and Malda district.

Table 5.7. Per cent of Currently Married Elderly Among ST and Non-ST Populations in India, West Bengal and Jalpaiguri District according to Sex

	ST			Non-ST		
	Person	Male	Female	Person	Male	Female
India	62.1	79.6	46.4	65.8	82.3	49.8
West Bengal	54.8	78.8	33.6	65.6	82.1	49.6
Jalpaiguri	51.5	66.1	34.7	65.6	82.1	49.6

Source: Census of India, 2011 (Percentages were computed by researcher)

Distribution of number of disabled persons per 1000 elderly persons among ST and non-ST populations in India, West Bengal and Jalpaiguri district is provided in Table 5.8. Disabilities were highest in case of ST population of Jalpaiguri district among all other populations in India, West Bengal and Jalpaiguri district. In India, West Bengal and Jalpaiguri district, number of disabilities among ST populations was higher than those among non-ST populations because compared to elderly persons among ST population, elderly among non-ST population lead more control and better lives.

Table 5.8. Distribution of Number of Disabled Persons per 1000 Elderly Among ST and Non-ST Populations in India, West Bengal and Jalpaiguri District according to Sex

		Disability Type								
		Total Disabilities	In Seeing	In Hearing	In Speech	In Movement	Mental Retardation	Mental Illness	Any Other	Multiple Disabilities
India	ST	65	17	13	1	17	1	1	6	9
	Non-ST	51	13	10	2	13	1	1	6	6
West Bengal	ST	55	16	11	1	11	1	1	5	9
	Non-ST	47	13	8	2	10	1	1	6	6
Jalpaiguri	ST	70	17	17	2	14	1	2	6	11
	Non-ST	53	15	10	1	10	1	2	6	8

Source: Census of India, 2011 (Numbers were computed by researcher)

Per cent distribution of literacy of elderly persons in India, West Bengal and Jalpaiguri district according to sex among ST and non-ST populations for the Censuses of India, 2001 and 2011 is provided in Table 5.9.

Table 5.9. Per cent Distribution of Literacy Among Elderly in India, West Bengal and Jalpaiguri District According to Sex among ST and Non-ST Populations

	Census	ST			Non-ST		
		Person	Male	Female	Person	Male	Female
India	2001	16.9	29.3	7.6	37.7	54.5	21.0
	2011	22.4	35.3	10.8	45.1	60.8	29.8
	% Decadal growth	35.9	50.4	14.7	66.2	79.0	56.2
West Bengal	2001	17.8	32.8	4.7	50.1	70.2	30.8
	2011	22.5	38.3	8.5	55.0	71.5	38.6
	% Decadal growth	31.4	48.1	16.0	69.0	74.9	62.4
Jalpaiguri	2001	20.3	31.5	7.0	44.0	62.3	25.2
	2011	25.0	38.0	10.0	48.3	64.7	31.1
	% Decadal growth	51.8	79.5	25.3	62.3	72.0	51.3

Source: Censuses of India, 2001 and 2011 (Percentages were computed by researcher)

There was tremendous improvement of literacy among elderly over 2001-2011 among ST and Non-ST populations in India, West Bengal and Jalpaiguri district. Among elderly of non-ST population in 2011, literacy level among elderly persons in West

Bengal was much higher than that in India and Jalpaiguri district. But literacy level of elderly persons belonging to ST population in 2011 in India, West Bengal and Jalpaiguri district were almost equal, but there were remarkable variations of literacy level of elderly persons belonging to non-ST population in 2011 in India, West Bengal and Jalpaiguri district.

5.5 Ageing in Jalpaiguri District on the Basis of Survey Data and Comparisons among ST and Non-ST Populations in Jalpaiguri District

Sampling units (s.u) of sampling frame were considered the households having at least one elderly person purposively because our study is based on elderly.

Per cent distribution of households with number of elderly persons versus number of households, number of generations of family members and number of elderly generations in the survey households of Jalpaiguri district are provided in the Table 5.10. Number of elderly persons in the survey households was 1 to 3; it was 1 in most of the households. Number of generations of family members and number of elderly generations were 3 and 1 respectively in most of the households.

Table 5.10. Per cent Distribution of Households with Number of Elderly, Number of Generations of Family Members and Number of Elderly Generations in Jalpaiguri District

Locality of residence	No. of elderly	Household	No. of generations of family members					No. of elderly generations		
			1	2	3	4	Total	1	2	Total
Urban	1	68	17.6	35.3	47.1	0.0	100	100	0.0	100
	2	28	28.6	28.6	42.8	0.0	100	100	0.0	100
	3	4	100	0.0	0.0	0.0	100	100	0.0	100
	Total	100	24.0	32.0	44.0	0.0	100	100	0.0	100
Rural (less ST)	1	76	0.0	42.1	57.9	0.0	100	100	0.0	100
	2	24	16.7	0	75.0	8.3	100	75.0	25.0	100
	Total	100	4.0	32.0	62.0	2.0	100	94.0	6.0	100
Rural (more ST)	1	92	0.0	39.1	60.9	0.0	100	97.8	2.2	100
	2	8	0.0	25.0	75.0	0.0	100	100	0	100
	Total	100	0.0	38.0	62.0	0.0	100	99.0	1.0	100

Source: Field survey

Per cent of households having exactly 1 elderly person in the households in urban, rural (less ST) and rural (more ST) were 68, 76 and 92 respectively. Per cent of households having 1, 2 and 3 generations of family members in urban, rural (less ST) and rural (more ST) areas were 24.0, 32.0 and 44.0; 4.0, 32.0 and 62.0; 0.0, 38.0 and 62.0 respectively.

Averages along with standard deviations (SD) of household size, number of children born, number of children alive and number of children living with the elderly persons of the sampled elderly in Jalpaiguri district according to locality of residence is provided in Table 5.11. These averages were higher in both rural areas than those in urban areas. Again these averages were higher in rural (more ST) area than those in rural (less Muslim) area in Jalpaiguri district.

Table 5.11. Averages along with SDs of Household Size, Number of Children Born, Number of Children Alive and Number of Children Living with Elderly of Sampled Elderly in Jalpaiguri District According to Locality of Residence (SDs are provided in brackets)

Locality of residence	Household size	No. of children born	No. of children alive	No. of children living with elderly
Urban	3.9 (1.5)	2.7 (1.7)	2.5 (1.6)	1.0 (0.7)
Rural (less ST)	5.1 (1.6)	3.8 (2.4)	3.7 (2.0)	1.2 (0.8)
Rural (more ST)	5.4 (1.4)	4.2 (1.7)	4.0 (1.5)	2.4 (1.2)

Source: Field Survey

It is evident from the above table that birth rate in rural (more ST) area were very high compared to those in other areas. Again in respect of number of children living with elderly persons is remarkably high in rural (more ST) area compared to other areas.

There are significant differences of averages of household size, number of children born, number of children alive and number of children living with the elderly persons of the sampled elderly between locality of residence in Jalpaiguri district with p-values <0.001 in all cases.

Living arrangement is an important factor for any human being, particularly for elderly persons. Per cent distribution of living arrangements for the elderly persons according to locality of residences and sex in the households of Jalpaiguri district is shown in Table 5.12. Per cent of elderly persons living alone or with spouse only was very limited in all the locality of residences. Living arrangement of elderly males in urban, rural (less ST) and rural (more ST) areas with spouse, sons, daughters and/or others in Jalpaiguri district were 58.8, 83.7 and 71.4 respectively. Living arrangement of elderly females in urban, rural (less ST) and rural (more ST) areas with spouse, sons, daughters and/or others in Jalpaiguri district were 41.1, 28.0 and 25.0 respectively. Living arrangements of majority of elderly males were with spouses, sons, daughters and/or others which were very high compared to those for elderly females in all the locality of

residences. Living arrangement of elderly males in urban, rural (less ST) and rural (more ST) areas without spouse, but with sons, daughters and/or others in Jalpaiguri district were 5.9, 5.5 and 28.6 respectively. Living arrangement of elderly females in urban, rural (less ST) and rural (more ST) areas without spouse, but with sons, daughters and/or others in Jalpaiguri district were 41.2, 68.0 and 75.0 respectively. Therefore, in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district, per cent of living arrangement of elderly females without spouse, but with sons, daughters and others were higher than those of elderly males. Reasons behind those facts were elderly females were living more years than elderly males and were becoming widows.

Table 5.12. Per cent Distribution of Living Arrangements of Elderly in Jalpaiguri District

Locality of residence	Sex	Living Arrangement				Total
		Alone	With spouse only	With spouse, sons, daughters and/or others	Without spouse, but with sons, daughters and/or others	
Urban	Person	8.8	17.6	50.1	23.5	100
	Male	11.8	23.5	58.8	5.9	100
	Female	5.9	11.8	41.1	41.2	100
Rural (less ST)	Person	0.0	8.1	61.3	30.6	100
	Male	0.0	10.8	83.7	5.5	100
	Female	0.0	4.0	28.0	68.0	100
Rural (more ST)	Person	0.0	0.0	54.5	45.5	100
	Male	0.0	0.0	71.4	28.6	100
	Female	0.0	0.0	25.0	75.0	100

Source: Field survey

Per cent distribution of households with number of elderly persons versus number of dependent elderly persons, number of working elderly persons; households having elderly persons as head of household in the households in Jalpaiguri district are presented in Table 5.13. Per cent of dependent elderly persons in urban, rural (less ST) and rural (more ST) areas in Jalpaiguri district were 48.0, 52.0 and 78.0 respectively. Per cent of working elderly persons in urban, rural (less ST) and rural (more ST) areas in Jalpaiguri district were 20.0, 38.0 and 4.0 respectively. Per cent of dependent elderly persons in the households were more in rural (more ST) area than that in urban and rural (less ST) areas. Therefore, economic condition of elderly persons in rural (more ST) area was very low compared to elderly persons in urban and rural (less ST) areas. Per cent of working elderly persons in urban area was less than in both the rural areas. Per cent of elderly heads were 56.0, 84.0 and 72.0 in urban, rural (less ST) and rural (more ST) areas respectively.

Table 5.13. Per cent Distribution of Households with Number of Elderly versus Number of Dependent Elderly, Number of Working Elderly etc in Jalpaiguri District

Locality of residence	No. of elderly	No. of dependent elderly				No. of working elderly				Elderly head
		0	1	2	Total	0	1	2	Total	
Urban	1	64.7	35.3	0.0	100	82.4	17.6	0.0	100	41.2
	2	28.6	42.9	28.5	100	71.4	14.3	14.3	100	85.7
	3	0.0	0.0	100	100	100	0.0	0.0	100	100
	Total	52.0	36.0	12.0	100	80.0	16.0	4.0	100	56.0
Rural (less ST)	1	57.9	42.1	0.0	100	71.1	28.9	0.0	100	81.6
	2	16.7	75.0	8.3	100	33.3	58.4	8.3	100	91.4
	Total	48.0	50.0	2.0	100	62.0	36.0	2.0	100	84.0
Rural (more ST)	1	23.9	76.1	0.0	100	95.7	4.3	0.0	100	71.7
	2	0.0	0.0	100	100	100	0.0	0.0	100	75.0
	Total	22.0	70.0	8.0	100	96.0	4.0	0.0	100	72.0

Source: Field survey

Per cent of elderly persons aged 60-69, 70-79 and 80+; currently married; dependent; having dependants; head of the households; involved in day-to-day purchase, big purchase, decision-making activities of the household; having immovable property; having liquid asset; presently working and/or pension holders among elderly persons according to locality of residence and sex in Jalpaiguri district are presented in Table 5.14. Percentages of elderly persons being currently married in urban, rural (less ST) and rural (more ST) areas were 67.6, 66.1 and 54.5 respectively. Percentages of elderly persons being dependent on others in urban, rural (less ST) and rural (more ST) areas were 44.1, 47.5 and 85.3 respectively. Per cent of elderly females being dependent on others was more than elderly males in urban and rural (less ST) areas, but in this context, percentages of elderly females and males in rural (more ST) area were almost equal. Percentages of elderly persons having dependents in urban, rural (less ST) and rural (more ST) areas were 20.6, 43.3 and 14.5 respectively. Percentages of elderly females having dependents in all the localities of residence were negligible. Percentages of elderly persons being head of household in urban, rural (less ST) and rural (more ST) areas were 44.1, 64.5 and 65.5 respectively. Percentages of elderly females being head of household in all the localities of residence were lesser than those of elderly males. Percentages of elderly persons being involved in day-to-day purchases of household in urban, rural (less ST) and rural (more ST) areas were 26.5, 53.2 and 80.0 respectively. Per cent of elderly females being involved in day-to-day purchases was lesser than elderly males in urban

and rural (less ST) areas, but in this context, percentages of elderly females and males in rural (more ST) area were almost equal. Percentages of elderly being involved in big purchases of household in urban, rural (less ST) and rural (more ST) areas were 26.5, 43.5 and 52.7 respectively. Percentages of elderly possessing immovable property in urban, rural (less ST) and rural (more ST) areas were 64.7, 58.1 and 25.5 respectively. Percentages of elderly persons possessing liquid assets in urban, rural (less ST) and rural (more ST) areas were 92.1, 54.8 and 49.1 respectively. Percentages of elderly persons presently earning (and/or pension holder) in urban, rural (less ST) and rural (more ST) areas were 44.1, 27.4 and 25.5 respectively.

Table 5.14. Per cent Distribution of Elderly Aged 60-69, 70-79 and 80+ with Various Attributes in Jalpaiguri District

Locality of residence	Sex	Per Cent among elderly			Currently married	Dependent	Having dependants	Head of household	Involved in household for			Having immovable property	Having liquid asset	Earning and/or pension holder
		60-69	70-79	80+					Day-to-day purchase	Big purchase	Decision-making activities			
Urban	Person	47.1	52.9	0.0	67.6	44.1	20.6	44.1	26.5	26.5	32.4	64.7	92.1	44.1
	Male	35.3	64.7	0.0	88.2	23.5	41.2	88.2	35.3	41.2	35.3	88.2	95.2	64.7
	Female	58.8	41.2	0.0	47.1	64.7	0.0	0.0	17.6	11.8	29.4	41.2	91.2	23.5
Rural (less ST)	Person	51.6	27.4	32.0	66.1	47.5	43.3	64.5	53.2	43.5	54.8	58.1	54.8	27.4
	Male	59.5	24.3	16.2	91.9	24.3	70.3	86.5	64.9	54.1	64.9	83.8	64.9	29.7
	Female	40.0	32.0	28.0	28.0	83.3	0.0	32.0	36.0	28.0	40.0	20.0	40.0	24.0
Rural (more ST)	Person	85.5	14.5	0.0	54.5	85.2	14.5	65.5	80.0	52.7	60.0	25.5	49.1	25.5
	Male	85.7	14.3	0.0	71.4	85.3	20.0	77.1	85.7	65.7	62.9	31.4	51.4	25.7
	Female	85.0	15.0	0.0	25.0	85.0	5.0	45.0	70.0	30.0	55.0	15.0	45.0	25.0

Source: Field survey

Elderly person of rural (more ST) areas were more dependent; having less dependants; more being head of household; more involved in day-to-day purchases and other activities, big purchases; having less immovable property, liquid asset; and less presently working and/or pension holders than those of elderly person of rural (less ST) areas.

Localities of residences were not homogeneous with respect to involvement of elderly persons in day-to-day purchases of the households (p-value < 0.001).

With respect to involvement of elderly persons in day-to-day purchases of households, elderly males and females of urban and rural (more ST) areas were homogeneous, but those of rural (less ST) were not homogeneous (p-value = 0.024). Localities of residences were not homogeneous with respect to involvement of elderly persons in big purchases of the households (p-value = 0.052).

With respect to involvement of elderly persons in big purchases of households, elderly males and females of urban, rural (less ST) and rural (more ST) areas were not homogeneous, respective p-values are 0.059, 0.038 and 0.011.

Localities of residences were homogeneous with respect to involvement of decision-making of the elderly persons in the households.

With respect to involvement of elderly persons in decision-making of households, elderly males and females of urban and rural (more ST) areas were homogeneous, but those of rural (less ST) area were not homogeneous (p-value = 0.047).

To study the share of financial contribution of the elderly members to the their respective households of the households in Jalpaiguri district, Table 5.15 presents the percent distribution of the households according to locality of residence, total households monthly income and monthly income (including pension, if any) of the elderly persons of the respective households. It was evident from the following Table that the contributions of the elderly persons to their respective households were negligible. Per cent of elderly persons with no contribution to their respective households were 24, 34 and 72 in urban, rural (less ST) and rural (more ST) areas respectively.

Table 5.15. Per cent Distribution of Households According to Household Monthly Income and Monthly Income (including Pension, if any) of Elderly in Jalpaiguri District

Locality of residence	Household monthly income (in Rs)	Monthly income (in Rs) (including pension, if any) of elderly			Total
		Nil	1 – 10,000	10,001 and above	
Urban	1 – 15,000	12	8	16	36
	15,001 – 30,000	8	4	20	32
	30,001 and above	4	0	28	32
	Total	24	12	64	100
Rural (less ST)	1 – 15,000	32	30	10	72
	15,001 – 30,000	2	12	4	18
	30,001 and above	0	4	6	10
	Total	34	46	20	100
Rural (more ST)	1 – 15,000	62	16	0	78
	15,001 – 30,000	10	8	2	20
	30,001 and above	0	2	0	2
	Total	72	26	2	100

Source: Field survey

Regarding association between household monthly income and monthly income (including pension, if any) of the elderly persons in the households, there was no association between them in case of urban area, but there were associations between them in case of rural (less ST) area (p-value = 0.012) and rural (more ST) area (p-value = 0.026).

Regarding the financial supports for the elderly persons from kin (not family members) of the households of Jalpaiguri District, Table 5.16 provides the per cent distribution of elderly persons enjoyed that supports according to locality of residence and sex. Percentages of elderly persons to get outside financial supports in urban, rural (less ST) and rural (more ST) areas were 20.6, 30.4 and 90.9 respectively. In this context, per cent of elderly in rural (more ST) area was very high compared to those in urban and rural (less ST) areas because of miserable economic condition of ST population.

Table 5.16. Per cent Distribution of Elderly Financially Supported by Kin (Not Household Member) in Jalpaiguri District

Locality of residence	Sex	Financial support from kin (not household member)		Total
		Yes	No/Does not arise	
Urban	Person	20.6	79.4	100
	Male	11.8	88.2	100
	Female	29.4	70.6	100
Rural (less ST)	Person	30.4	69.6	100
	Male	27.0	73.0	100
	Female	36.0	64.0	100
Rural (more ST)	Person	90.9	9.1	100
	Male	88.6	11.4	100
	Female	95.0	5.0	100

Source: Field survey

Localities of residences were not homogeneous with respect to financial supports from sons, daughters, brothers and relatives (not household members) (p-value < 0.001). In this respect, elderly males and females of all localities of residence were homogeneous. Per cent of elderly females to get outside financial supports was higher than that of elderly males in all localities of residence.

Regarding beneficiary covered under National Old Age Pension Scheme (NOAPS), only a negligible portion of elderly females of the households of Jalpaiguri district were covered under the said scheme and the amount of money provided to them were very small (Rs 400 monthly). Per cent distribution of elderly females in the households of Jalpaiguri district covered under National Old Age Pension Scheme is presented in Table 5.17.

Table 5.17. Per cent Distribution of Elderly Females Covered under NOAPS in Jalpaiguri District

Locality of residence	Percent covered under NOAPS out of elderly females	Percent covered under NOAPS out of elderly persons
Urban	17.6	8.8
Rural (less ST)	20.0	8.1
Rural (more ST)	25.0	9.1

Source: Field survey

Regarding economic security of the elderly persons of Jalpaiguri district, Table 5.18 provides the per cent distribution of the elderly persons (a) capable of spending money for buying clothes, foods, medicines etc for them or toys for their grandchildren, (b) getting sufficient food and clothes, they needed and (c) getting sufficient medicines and health care whenever they needed according to locality of residence and sex. Per cent of elderly persons capable of spending money for buying in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 61.8, 42.3 and 39.5 respectively. Per cent of elderly persons getting sufficient food and clothes in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 85.3, 62.9 and 76.4 respectively. Per cent of elderly persons getting sufficient medicines and health care in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 77.4, 37.1 and 72.7 respectively. Elderly persons in urban area of Jalpaiguri district were in the best socio-economic position in getting necessities of life than the elderly of rural (less ST) and rural (more ST) areas. There were not prominent non-homogeneities among elderly males and females in getting necessities of life in all the localities of residence in Jalpaiguri district.

Table 5.18. Per cent Distribution of Elderly Getting Necessities of Life in Jalpaiguri district

Locality of residence	Sex	Capable of spending money for buying	Getting sufficient food and clothes	Getting sufficient medicines and health care
Urban	Person	61.8	85.3	77.4
	Male	66.5	88.2	78.0
	Female	57.1	82.4	76.7
Rural (less ST)	Person	42.3	62.9	37.1
	Male	43.2	67.6	40.5
	Female	39.0	56.0	32.0
Rural (more ST)	Person	39.5	76.4	72.7
	Male	40.0	77.1	74.3
	Female	33.4	75.0	70.0

Source: Field survey

Localities of residences were not homogeneous regarding (a) capability of spending money for buying, (b) getting sufficient food and clothes and (c) getting sufficient medicines and health care of elderly persons, p-values in each case is less 0.001.

With respect to involvement of elderly in day-to-day purchases of households, elderly males and females of urban and rural (more ST) areas were homogeneous, but those of rural (less ST) were not homogeneous (p-value = 0.024).

Elderly males and females of all the localities of residence were homogeneous regarding (a) capability of spending money for buying, (b) getting sufficient food and clothes and (c) getting sufficient medicines and health care.

Regarding the physical mobility, hospitalization during last one year and feeling depressed of the elderly persons in the households in Jalpaiguri district, findings are presented in Table 5.19. Per cent of elderly persons mobile in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 85.3, 75.8 and 89.1 respectively. Per cent of elderly persons confined to bed in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 8.8, 4.8 and 3.6 respectively. Per cent of elderly persons confined to house in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 5.9, 19.4 and 7.3 respectively. Per cent of elderly persons hospitalized during last year in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 2.9, 29.0 and 1.8 respectively. Per cent of elderly persons felt depressed in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district were 38.2, 82.3 and 80.0 respectively.

Table 5.19. Per cent Distribution of Elderly Regarding their (a) Physical Mobility, (b) Hospitalization During Last One Year and (c) Depression in Jalpaiguri District

Locality of residence	Sex	Degree of physical mobility				Hospitalization during last one year	Felt depressed
		Mobile	Confined to bed	Confined to house & others	Total		
Urban	Person	85.3	8.8	5.9	100	2.9	38.2
	Male	82.4	11.8	5.8	100	5.9	35.3
	Female	88.2	5.9	5.9	100	0.0	41.2
Rural (less ST)	Person	75.8	4.8	19.4	100	29.0	82.3
	Male	86.5	2.7	10.8	100	18.9	75.7
	Female	60.0	8.0	32.0	100	44.0	92.0
Rural (more ST)	Person	89.1	3.6	7.3	100	1.8	80.0
	Male	91.4	2.9	5.7	100	2.9	82.9
	Female	85.0	5.0	10.0	100	0.0	75.0

Source: Field survey

Localities of residences are homogeneous regarding degree of physical mobility, elderly males and females of urban and rural (more ST) areas were homogeneous, but those of rural (less ST) area were not homogeneous (p-value = 0.029).

Regarding hospitalization of elderly during last one year, elderly males and females of all the localities of residence were homogeneous; localities of residence were also homogeneous in this context. Regarding feeling depressed among the elderly, elderly males and females were homogeneous in all the localities of residence; localities of residence were not homogeneous in this context (p-value < 0.001).

Percent distribution of elderly persons of the households in Jalpaiguri district associated with (a) cultural activities of their localities, (b) any religious organizations/associations and (c) any political activities according to locality of residence and sex wise are presented in Table 5.20. Elderly females of urban areas were more associated with (a) different activities including cultural of their localities, (b) any religious organizations/associations than elderly males, but the reverse was in case of association with any political activities. Per cent of elderly persons associated with cultural activities in urban, rural (less ST) and rural (more ST) areas in Jalpaiguri district were 29.4, 35.5 and 25.5 respectively. Per cent of elderly persons associated with religious activities in urban, rural (less ST) and rural (more ST) areas in Jalpaiguri district were 35.3, 33.9 and 25.6 respectively. Per cent of elderly persons associated with political activities in urban, rural (less ST) and rural (more ST) areas in Jalpaiguri district were 26.5, 27.4 and 25.5 respectively. Per cent of elderly persons associated with cultural, religious and political activities were least among elderly persons in rural (more ST) area of Jalpaiguri district.

Table 5.20. Per cent Distribution of Elderly Associated with Cultural Activities, Religious Organizations/Associations and Political Activities in Jalpaiguri District

Locality of residence	Sex	Associated with cultural activities	Associated with religious organizations/associations	Associated with Political Activities
Urban	Person	29.4	35.3	26.5
	Male	35.3	23.5	35.3
	Female	23.5	47.1	17.6
Rural (less ST)	Person	35.5	33.9	27.4
	Male	45.9	37.8	32.4
	Female	20.0	28.0	20.0
Rural (more ST)	Person	25.5	23.6	25.5
	Male	25.7	22.9	25.7
	Female	25.0	25.0	25.0

Source: Field survey

In case of association with different activities including cultural of localities of the elderly persons, elderly males and females of urban and rural (more ST) areas were homogeneous, but those of rural (less ST) area in this respect were not homogeneous (p-value=0.036). Localities of residence were homogeneous in this respect.

In case of association with any religious organizations/associations of the elderly persons, elderly males and females of all the localities of residence were homogeneous; localities of residence were homogeneous in this respect.

In case of association with any political activities of the elderly persons, elderly males and females of all the localities of residence were homogeneous; localities of residence were homogeneous in this respect.

Percent distribution of elderly person in the households of Jalpaiguri district with their general feelings about their feeling lonely, health etc on the basis of locality of residence and sex are presented in Table 5.21.

Table 5.21. Per cent Distribution of Elderly with Their General Feelings about Their Feeling Lonely, Health etc in Jalpaiguri District

Locality of residence	Sex	General feelings								
		Loneliness	Health not good	Children not stay with them	Children not visit often	Nobody to help	Nobody to prepare food	Afraid of thieves	Not able to move around	Nobody to help when felt sick
Urban	Person	23.5	76.5	20.6	11.8	20.6	20.6	8.8	11.9	9.0
	Male	5.9	70.6	23.5	11.6	23.5	17.6	11.8	11.7	11.9
	Female	41.2	82.4	17.6	12.0	17.6	23.5	5.9	12.1	6.0
Rural (less ST)	Person	56.5	62.9	14.5	8.1	27.4	9.7	16.1	16.1	25.8
	Male	51.4	51.4	5.4	5.4	35.1	10.8	16.2	13.5	27.0
	Female	64.0	80.0	28.0	12.0	16.0	8.0	16.0	20.0	24.0
Rural (more ST)	Person	32.7	54.5	0.0	0.0	0.0	0.0	0.0	1.8	0.0
	Male	31.4	51.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Female	35.0	60.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0

Source: Field survey

Regarding the feeling of unhealthy by the elderly persons, localities of residence were homogeneous. Regarding the feelings of (a) loneliness, (b) children not stay with them, (c) children not visit often, (d) nobody to help, (e) nobody to prepare food, (f) afraid of thieves, (g) not able to move around and (h) nobody to help when felt sick, localities of residence were not homogeneous and respective p-values are 0.002, 0.004, 0.049, < 0.001, 0.003, 0.008, 0.033 and < 0.001.

Elderly of the households of Jalpaiguri district expressed their views whether children were the main support for the parents at old ages; findings of the same are presented in Table 5.22.

Table 5.22. Per cent Distribution of Elderly in Opining Children being Main Support for Parents at Elderly Age in Jalpaiguri District

Locality of residence	Children being main support at elderly age		
	Person	Male	Female
Urban	79.4	76.5	82.4
Rural (less ST)	71.0	75.7	64.0
Rural (more ST)	100	100	100

Source: Field survey

Regarding opinion that children being main support for parents at elderly age, localities of residence were not homogeneous (p -value < 0.001). But elderly males and females of all the localities of residence were homogeneous in this respect.

Regarding fulfillment of expectations in life by the elderly persons, the Table 5.23 presents the degree of fulfillment of expectations in life by the elderly persons according to locality of residence and sex in Jalpaiguri district.

Table 5.23. Per cent Distribution of Elderly with Degree of Fulfillment of Their Expectation in Life in Jalpaiguri District

Locality of residence	Sex	Less or something	Much or everything	Total
Urban	Person	47.1	52.9	100
	Male	41.2	58.8	100
	Female	53.0	47.0	100
Rural (less ST)	Person	53.2	46.8	100
	Male	45.9	54.1	100
	Female	44.0	56.0	100
Rural (more ST)	Person	41.8	58.2	100
	Male	40.0	60.0	100
	Female	45.0	55.0	100

Source: Field survey

Regarding degree of fulfillment of expectation in life by the elderly persons, elderly males and females of all the localities of residences were homogeneous; localities of residence were also homogeneous in this respect.

It may be mentioned that drinking alcohol (mostly domestic) and smoking are common habits of all ST people as a whole, therefore these habits are also habits of elderly males and females among ST community.

The determinants of (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed of the elderly persons were studied with the help of binary logistic regression analysis. Attempts had made to formulate some binary logistic regression equation on the basis of the survey data on the elderly persons of the sampled households of Jalpaiguri district.

Odds ratio = chance of happening/chance of not happening

Chance of happening=odds ratio/(1 + odds ratio), Odds ratio lies between 0 to ∞ .

For the binary logistic regression, we have converted the categories of the categorical variables (a) 'education' into a dichotomous categorical variable having the categories (i) Less educated consists of categories illiterate, primary and (ii) Educated

consists of categories secondary and above and (b) ‘past occupation’ into a dichotomous categorical variable having the categories (i) Less earning past occupation consists of unemployed, cultivation, labourer, priest, beggar and housewife and (ii) more earning past occupation consists of other categories of past occupation. Family size is denoted as fs.

Feeling that “Health is not good” is a great source of dissatisfaction and depression of elderly. Table 5.24 provides the results of binary logistic regression used to assess the general feeling of the elderly persons that “Health is not good” in Jalpaiguri district.

Table 5.24. Binary Logistic Regression used to Assess General Feeling of Elderly that “Health not good” in Jalpaiguri District

Determinant (with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a) Rural(less ST) (t1=1, t2=0)	-1.060	0.045	0.347	Urban Area (t1=0, t2=0)
(b) Rural(more ST) (t1=0, t2=1)	-1.060	0.049	0.362	
Sex (Female) (s=1)	0.517	0.325	1.677	Male (s=0)
Family size	-0.441	0.004	0.644	
Education (Less educated) (e=1)	1.015	0.049	2.758	Educated (e=0)
Past occupation (Less earning occupation) (p=1)	0.037	0.789	1.038	More earning occupation (p=0)
Age (in years)	0.112	0.005	1.119	
Feeling nobody to help when sick(Yes) (f=1)	0.339	0.567	1.404	No (f=0)
Marital status(Not currently married) (m=1)	0.012	0.657	1.012	Currently Married (m=0)
Possessing immovable asset (No) (i=1)	0.237	0.555	1.267	Yes (i=0)
Possessing liquid asset (No) (l=1)	0.830	0.049	2.293	Yes (l=0)
Working and/or pension holder (No) (w=1)	0.261	0.632	1.298	Yes (w=0)
Constant	-4.034	0.041	0.018	
Overall percentage of correct prediction : 76.2 Nagelkerke R Square : 0.235 Hosmer and Lameshow test for goodness of fit : Good (P-value=0.389)				

Source: Field survey

In this context, significant determinants are locality of residence (Rural (less ST)/ Rural (more ST)), family size (negatively related) and education (Less educated), age, possessing liquid asset (No) (positively related); insignificant (not prominent/important) determinants are sex (Female), past occupation (Less earning occupation), feeling nobody to help when sick (Yes), marital status (Not currently married), possessing immovable asset (No), working and/or pension holder (No) (positively related).

Odds ratio for ‘Health not good’

$$= 0.018 \times 0.347^{t1} \times 0.362^{t2} \times 1.677^s \times 0.644^{fs} \times 2.758^e \times 1.038^p \times 1.119^{age} \times 1.404^f \times 1.012^m \times 1.267^i \times 2.293^l \times 1.298^w$$

Being a head of household is an indication of satisfaction of the elderly persons living in the household. Table 5.25 provides the results of binary logistic regression to determine whether the elderly person being “Head of household” in Jalpaiguri district.

Table 5.25. Binary Logistic Regression used to Determine Whether Elderly Being “Head of household” in Jalpaiguri District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a)Rural(less ST) (t1=1,t2=0)	2.147	0.013	8.561	Urban Area (t1=0, t2=0)
(b)Rural(more ST) (t1=0,t2=1)	2.140	0.027	8.503	
Sex (Male) (s=1)	2.168	<0.001	8.744	Female (s=0)
Family size	-0.058	0.124	0.944	
Education (Educated) (e=1)	0.078	0.423	1.081	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	1.822	0.049	6.183	Less earning occupation (p=0)
Age (in years)	-0.094	0.019	0.911	
Marital Status(Currently married) (m=1)	0.062	0.656	1.064	Not currently married(m=0)
Possessing immovable asset(Yes)(i=1)	1.547	0.015	4.696	No (i=0)
Possessing liquid asset(Yes)(l=1)	0.555	0.378	1.742	No(l=0)
Working and/or pension holder(Yes) (w=1)	0.459	0.486	1.583	No (w=0)
Constant	1.359	0.559	3.892	
Overall percentage of correct prediction : 80.8 Nagelkerke R Square : .0561 Hosmer and Lameshow test for goodness of fit : Good (P-value= 0.127)				

Source: Field survey

In this context, significant determinants are locality of residence (Rural (less ST)/ Rural (more ST)), sex (Male), past occupation (More earning occupation), possessing of immovable asset (Yes) (positively related) and age (negatively related); insignificant (not prominent/important) determinants are education (Educated), marital status (Currently married), possessing liquid asset (Yes), working and/or pension holder (Yes) (positively related) and family size (negatively related).

Odds ratio for ‘Head of household’

$$= 3.892 \times 8.561^{t1} \times 8.503^{t2} \times 8.744^s \times 0.944^{fs} \times 1.081^e \times 6.183^p \times 0.911^{age} \times 1.064^m \times 4.696^i \times 1.742^l \times 1.583^w$$

Involvement of the elderly person in the household activities is a prominent indicator for their satisfactions. Table 5.26 provides the results of binary logistic regression to determine whether the elderly person being “Involved in day-to-day purchases of household and other activities of household” in Jalpaiguri district.

In this context, significant determinants are locality of residence (Rural (less ST)/ Rural (more ST)) (positively related) and age (negatively related); insignificant (not prominent/important) determinants are sex (Male), marital status (Currently married),

education (Educated), past occupation (More earning occupation), possessing immovable asset (Yes), possessing liquid asset (Yes), working and/or pension holder (Yes) (positively related) and family size (negatively related).

Table 5.26. Binary Logistic Regression used to Determine whether Elderly Being “Involved in day-to-day purchase & other activities of household” in Jalpaiguri District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a) Rural (less ST) (t1=1, t2=0)	2.044	0.003	7.719	Urban Area
(b) Rural (more ST) (t1=0,t2=1)	2.861	<0.001	17.479	(t1=0, t2=0)
Sex (Male)(s=1)	0.640	0.238	1.897	Female (s=1)
Family size	-0.128	0.391	0.879	
Education (Educated) (e=1)	0.578	0.396	1.783	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.054	0.578	1.055	Less earning occupation (p=0)
Age (in years)	-0.140	<0.001	0.870	
Marital status (Currently married)(m=1)	0.704	0.190	2.023	Not currently married (m=0)
Possessing immovable asset (Yes)(i=1)	0.090	0.666	1.094	No(i=0)
Possessing liquid asset (Yes)(l=1)	0.324	0.564	1.382	No(l=0)
Working and/or pension holder (Yes)(w=1)	0.360	0.551	1.433	No(w=0)
Health not good (No)(h=1)	0.511	0.258	1.670	Yes(h=0)
Constant	5.011	0.356	150.055	
Overall percentage of correct prediction : 79.5 Nagelkerke R Square : 0.475				
Hosmer and Lameshow test for goodness of fit : Good (P-value= 0.389)				

Source: Field survey

Odds ratio for ‘Involved in day-to-day purchase & other activities of household’
 $= 150.055 \times 7.719^{t1} \times 17.479^{t2} \times 1.897^s \times 0.879^{fs} \times 1.783^e \times 1.055^p \times 0.870^{age} \times 2.023^m \times 1.094^i \times 1.382^l \times 1.433^w \times 1.670^h$

Another involvement of the elderly person in the household activities is their involvement in big purchases like land, house, car etc of the household Table 5.27 provides the results of binary logistic regression to determine whether the elderly person being “Involved in big purchase like land, house, car etc of household” in Jalpaiguri district. In this context, significant determinants are locality of residence (Rural (less ST)/ Rural (more ST)), sex (Male), working and/or pension holder (Yes) (positively related) and age, family size (negatively related); insignificant (not prominent/important) determinants are education (Educated), past occupation (More earning occupation), marital status (Currently married), possessing immovable asset (Yes), possessing liquid asset (Yes), health not good (No) (positively related).

Table 5.27. Binary Logistic Regression used to Determine whether Elderly Being “Involved in big purchase like land, house, car etc of household” in Jalpaiguri District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a) Rural (less ST) (t1=1,t2=0)	2.086	0.004	8.053	Urban Area (t1=0,t2=0)
(b) Rural (more ST) (t1=0,t2=1)	1.907	0.019	6.730	
Sex (Male)(s=1)	0.844	0.049	2.325	Female(s=0)
Family size	-0.379	0.014	0.684	
Education (Educated) (e=1)	0.098	0.506	1.103	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.110	0.654	1.116	Less earning occupation (p=0)
Age (in years)	-0.173	<0.001	0.841	
Marital status (Currently married)(m=1)	0.744	0.178	2.104	Not currently married(m=0)
Possessing immovable asset (Yes)(i=1)	0.630	0.260	1.877	No(i=0)
Possessing liquid asset (Yes)(l=1)	0.686	0.210	1.985	No(l=0)
Working and/or pension holder (Yes)(w=1)	1.689	0.008	5.415	No(w=0)
Health not good (No)(h=1)	0.310	0.411	1.363	Yes(h=0)
Constant	6.001	0.469	403.832	
Overall percentage of correct prediction : 78.1 Nagelkerke R Square : 0.516 Hosmer and Lameshow test for goodness of fit : Good (P-Value=0.228)				

Source: Field survey

Odds ratio for ‘Involved in big purchase like land, house, car etc of household’

$$= 403.832 \times 8.053^{t1} \times 6.730^{t2} \times 2.325^s \times 0.684^{fs} \times 1.103^e \times 1.116^p \times 0.841^{age} \times 2.104^m \times 1.877^i \times 1.985^l \times 5.415^w \times 1.363^h$$

Involvement in decision-making in the household of the elderly is also a major source of satisfactions of the elderly persons. Table 5.28 provides the results of binary logistic regression to determine whether the elderly person being ‘Involved in decision-making activities of household’ in Jalpaiguri district. In this context, significant determinants are locality of residence (Rural (less ST)/ Rural (more ST)), possessing immovable asset (Yes), possessing liquid asset (Yes) (positively related) and age (negatively related); insignificant (not prominent/important) determinant are sex (Male), education (Educated), past occupation (More earning occupation), marital status (Currently married), health not good (No), working and/or pension holder (Yes) (positively related) and family size (negatively related).

Table 5.28. Binary Logistic Regression used to Determine whether Elderly Being ‘Involved in decision-making activities of household’ in Jalpaiguri District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(a) Rural (less ST) (t1=1,t2=0)	2.310	<0.001	10.072	Urban Area (t1=0,t2=0)
(b) Rural (more ST) (t1=0,t2=1)	1.859	0.016	6.418	
Sex (Male)(s=1)	0.105	0.567	1.111	Female(s=0)
Family size	-0.157	0.280	0.854	
Education (Educated) (e=1)	0.321	0.601	1.378	Less educated (e=0)
Past occupation (More earning occupation) (p=1)	0.078	0.569	1.081	Less earning occupation (p=0)
Age (in years)	-0.196	<0.001	0.822	
Marital status (Currently married)(m=1)	0.585	0.251	1.794	Not currently married (m=0)
Possessing immovable asset (Yes)(i=1)	0.898	0.048	2.455	No(i=0)
Possessing liquid asset (Yes)(l=1)	0.850	0.049	2.339	No(l=0)
Working and/or pension holder (Yes)(w=1)	0.553	0.357	1.739	No(w=0)
Health not good (No)(h=1)	0.351	0.412	1.420	Yes(h=0)
Constant	6.080	0.018	437.029	
Overall percentage of correct prediction : 83.6 Nagelkerke R Square : 0.612 Hosmer and Lameshow test for goodness of fit : Good (P-Value=0.134)				

Source: Field survey

Odds ratio for ‘Involved in decision-making activities of household’

$$= 437.029 \times 10.072^{t1} \times 6.418^{t2} \times 1.111^s \times 0.854^{fs} \times 1.378^e \times 1.081^p \times 0.822^{age} \times 1.794^m \times 2.455^i \times 2.339^l \times 1.739^w \times 1.420^h$$

Feeling depressed by the elderly persons is a great a great dissatisfaction among them. Table 5.29 provides the results of binary logistic regression to determine whether the elderly person ‘Feeling depressed’ in Jalpaiguri district. In this context, significant determinants are locality of residence (Rural (less ST)/ Rural (more ST)), age, marital status (Not currently married), health not good (Yes) (positively related); insignificant (not prominent/important) determinants are sex (Female), education (Less educated), past occupation (Less earning occupation), possessing immovable asset (No), possessing liquid asset (No), working and/or pension holder (Yes) (positively related) and family size (negatively related)

Table 5.29. Binary Logistic Regression used to Determine whether Elderly ‘Feeling depressed’ in Jalpaiguri District

Determinant(with compared category)	B	P-value	Exp(B) (Odds ratio)	Reference category
Locality of residence				
(c) Rural (less ST) (t1=1,t2=0)	1.338	0.030	3.810	Urban Area (t1=0, t2=0)
(d) Rural (more ST) (t1=0,t2=0)	1.274	0.043	3.574	
Sex (Female)(s=1)	0.600	0.253	1.822	Male(s=0)
Family size	-0.213	0.151	0.808	
Education (Less educated) (e=1)	0.091	0.765	1.098	Educated (e=0)
Past occupation (Less earning occupation) (p=1)	0.706	0.310	2.027	More earning occupation (p=0)
Age (in years)	0.071	0.048	1.074	
Marital status (Not currently married)(m=1)	1.007	0.049	2.736	Currently married (m=0)
Possessing immovable asset (No)(i=1)	0.099	0.634	1.104	Yes(i=0)
Possessing liquid asset (Yes)(l=1)	0.315	0.512	1.370	Yes(l=0)
Working and/or pension holder (Yes)(w=1)	0.179	0.341	1.196	Yes(w=0)
Health not good (Yes)(h=1)	1.361	0.003	3.899	No(h=0)
Constant	-5.003	0.019	0.007	
Overall percentage of correct prediction : 74.2 Nagelkerke R Square : 0.482 Hosmer and Lameshow test for goodness of fit : Good (P-Value=0.0.120)				

Source: Field survey

Odds ratio for ‘Feeling depressed’

$$= 0.007 \times 3.810^{t1} \times 3.574^{t2} \times 1.882^s \times 0.808^{fs} \times 1.098^e \times 2.027^p \times 1.074^{age} \times 2.736^m \times 1.104^i \times 1.370^l \times 1.196^w \times 3.899^h$$

To assess life satisfaction of the elderly persons, following 11 questions (given in Table 5.30 below) with 3-point rating (agree-3/uncertain-2/disagree-1) were asked to the sampled elderly persons. Dimension reduction: Factor Analysis coupled with Reliability Analysis techniques were employed to the questions. Table 5.30 provides two components (factors or latent variables): ‘Perceived goodness of elderly age’ and ‘Perceived hardship of elderly age’ were generated along with associated questing and their loadings and percentage of variance explained by the factors in Jalpaiguri district. Overall satisfaction of the elderly may be assessed through only two generated factors. These two factors for measuring life satisfaction may be correlated and regressed to other variables of the elderly like sex, marital status, living arrangement, being head of the household, presently working and/or pension holder, possession of immovable and liquid assets, health condition, involvements in household activities etc.

Table 5.30. Two Components (Factors) Generated along with Associated Questions and their Loadings and Percent of Variance Explained by Factors in Jalpaiguri District

Factor No.	Name of factor	Variable (Question)	Average	Loading	% of Variance explained	Reliability (Cronbach's α)
1	Perceived goodness of elderly age(F_1)	As you grow older, things seem to better than before(X_1)	1.56	0.926	46.55	0.821 (Good)
		Old age is the most pleasant time of your life(X_2)	1.57	0.917		
		You are just as happy as when you were younger(X_3)	1.63	0.882		
		You expect some pleasant and interesting things to happen to you in coming years(X_4)	1.84	0.728		
		You feel old and somewhat tired(X_5)	1.80	-0.492		
		As you look back on your life, you feel satisfied and happy(X_6)	1.85	0.799		
		You have made plans for things you will be doing in a month or year(X_7)	1.50	0.792		
		You may get scope to do your unfinished works(X_8)	1.74	0.725		
2	Perceived hardship of elderly age(F_2)	Most of the things you do are boring and monotonous(X_9)	2.21	0.913	26.38	0.910 (Excellent)
		Compared to other people, you get disappointments too often(X_{10})	2.31	0.887		
		In spite of what some people say, lot of average men are getting worse, not better(X_{11})	2.28	0.890		
% of Total variance explained by Factor Analysis			72.94			
KMO Measure of Sampling Adequacy			0.885 (Meritorious)			
Bartlet's Test of Sphericity Approx. χ^2			1403.178			
df			55			
p-value			< 0.001			

Source: Field survey

Equations of factors with variables:

$$F_1 = 0.926 X_1 + 0.917 X_2 + 0.882 X_3 + 0.728X_4 - 0.492X_5 + 0.799X_6 + 0.792X_7 + 0.725X_8$$

$$F_2 = 0.913 X_9 + 0.887 X_{10} + 0.890 X_{11}$$

5.6 Summary

Attempts have been made in this chapter to study and compare the magnitude of population ageing and its trends and different factors relating to population ageing like sex ratio, marital status, living arrangement etc among two distinct communities ST and non-ST of Jalpaiguri district based on secondary (census) and primary data.

On the basis of secondary data (Census of India, 2011) and primary data from Jalpaiguri district, following findings were obtained:

- (i) Per cents of elderly persons to total population were less among ST population compared to those among non-ST population in India, West Bengal and Jalpaiguri district. Percentages of elderly females were higher than those of elderly males among both ST and non-ST populations in India, West Bengal and Jalpaiguri district except ST population in Jalpaiguri district. Among ST populations, per cent of elderly persons of was remarkably low in Jalpaiguri district compared to those in India and West Bengal. ST populations in India and Jalpaiguri district were youthful, but Non-ST populations in India, West Bengal and Jalpaiguri were mature. Per cent of elderly persons of oldest-old age group among non-ST population of India and West Bengal and Jalpaiguri district were around 1.0, but those among ST population were around 0.5.
- (ii) Sex ratio among ST population was higher than that among non-ST population in India, West Bengal and Jalpaiguri. Again sex ratio among ST elderly population was higher than that among non-ST elderly population in India and West Bengal, but sex ratio among ST elderly population was lesser than that among non-ST elderly population in Jalpaiguri district – that exception was due to regional effect of low economic and healthcare conditions of Jalpaiguri district.
- (iii) More than 70 per cent households in Jalpaiguri district did not have any elderly persons in the household. Since elderly females were expected to live more years than elderly males, per cent of elderly female heads was almost twice of that of elderly male heads. Nearly 20 per cent of households in Jalpaiguri district were having elderly heads.
- (iv) Work participation among ST elderly females was very high compared to that among non-ST elderly females.

- (v) Per cent of currently married elderly males was about twice that of currently married elderly females in Jalpaiguri district. Percentages of currently married elderly among both ST and non-ST populations of Jalpaiguri were lesser than those in India, West Bengal and Malda district.
- (vi) Disabilities were highest in case of ST population of Jalpaiguri district among all other populations in India, West Bengal and Jalpaiguri district. In India, West Bengal and Jalpaiguri district, number of disabilities among ST populations were higher than those among non-ST populations because compared to elderly among ST population, elderly among non-ST population lead more control and better lives.
- (vii) Literacy rate of elderly persons among ST community, particularly among ST females were very low.
- (viii) In Jalpaiguri district, elderly persons of rural (more ST) area were more dependent; having less dependants; more being head of household; more involved in day-to-day purchases and other activities, big purchases; decision-making of family; having less immovable property, liquid asset, and presently working and/or pension holders than those of elderly of rural (less ST) area.
- (ix) In Jalpaiguri district, majority (above 60 per cent) of the elderly persons were not taking any financial supports from kin (not family members) in urban and rural (less ST) areas, but majority (above 90 per cent) of the elderly were taking financial supports from kin (not family members) in case of rural (more ST) area.
- (x) In Jalpaiguri district; in urban, rural (less ST) and rural (more ST) areas of Jalpaiguri district, per cent of living arrangement of elderly females without spouse, but with sons, daughters and others were higher than those of elderly males. Reasons behind those facts were elderly females were living more years than elderly males and were becoming widows.
- (xi) In Jalpaiguri district, economic condition of elderly persons in rural (more ST) area was very low compared to elderly in urban and rural (less ST) areas. Per cent of working elderly in urban area was less than in both the rural areas. Elderly person of rural (more ST) areas were more dependent; having less dependants; more being head of household; more involved in day-to-day purchases and other activities, big purchases; having less immovable property, liquid asset; and less presently working and/or pension holders than those of elderly person of rural (less ST) areas.

Regarding the financial supports for the elderly persons from kin (not family members) of the households, per cent of elderly persons in rural (more ST) area was very high compared to those in urban and rural (less ST) areas because of miserable economic condition of ST population.

The above backgrounds form the reasons for the gaps of socio-economic and cultural development between ST and non-ST populations in India and in Jalpaiguri district. One cannot simply plan for reducing the gaps between elderly persons belonging to ST and non-ST communities, that is, for improving socio-economic status of elderly persons belonging to ST community. As change agents for individuals and organizations need to come out with programmes, planning and new initiatives that will cater to the growth and development of ST community to (a) mobilize and build awareness on their rights, welfare programmes and schemes not only for elderly persons belonging to ST community, but also for the total population belonging to ST community, (b) provide proper education to the children belonging to ST community so that there would be socio-economic and cultural upliftment takes place among ST community. We have to keep in mind that the proper growth and development of a country like India is not possible, if a share of population like ST population of India is lagging behind compared to that of non-ST population of India.

Attempts have been made to develop binary logistic regression equations of attributes of the elderly persons determining the well-being of the elderly persons in Jalpaiguri district (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed were performed.

In assessing life satisfaction of the elderly persons, 11 questions (mentioned earlier) with 3-point rating (agree-3/uncertain-2/disagree-1) using factor analysis coupled with reliability analysis, two factors (latent variables): (a) perceived goodness of elderly age, (b) perceived hardship of elderly age were derived.

CHAPTER 6

POPULATION AGEING IN INDIA AND WEST BENGAL AMONG SCHEDULED CASTES (SC) POPULATION

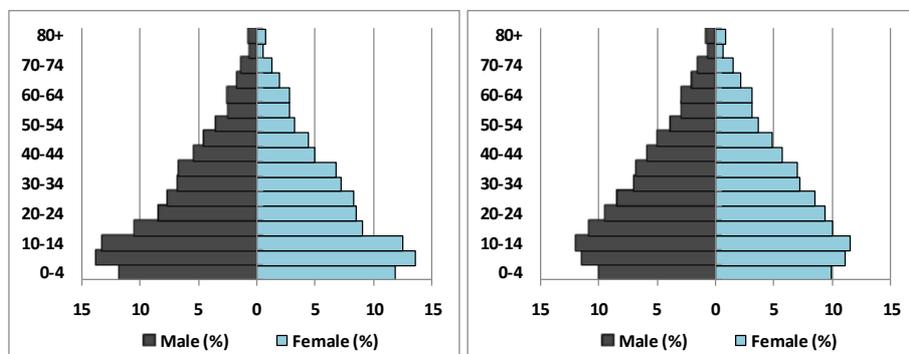
6.1 Introduction

In the present chapter we have assessed and compared the situations of population ageing and social security of the elderly persons among Scheduled Castes (SC) in India and West Bengal. According to Census of India 2011, (a) the percentage shares of SC population to total population in India and West Bengal were 16.6 and 23.5 respectively, (b) top two districts in West Bengal with respect of SC populations were Cooch Behar and Jalpaiguri having 50.2 and 37.7 per cent SC population to total populations respectively; both of them belong to North Bengal, (c) again Jalpaiguri district is in the first position in West Bengal in respect of ST population and (d) district Kolkata is in the lowest position with respect to SC population having only 5.4 per cent of SC population to total population. Like scheduled tribes, scheduled castes population is also a weaker/backward section of society in India. Another weaker/backward section of society in India is Other Backward Class (OBC). The backwardness (social and economic) of SC population is not extremely serious compared to that belonging to ST population. Office of the Registrar General and Census Commissioner, India, Ministry of Home Affairs, Government of India have been collecting Indian census data for (a) general population, (b) religious group population wise, (c) SC population and (d) ST population. We have made an attempt to find out previous studies on population ageing among SC population in India and abroad, but no such works could be traced out. The present study is based on the secondary data collected from census of India for the census 2001 and 2011 on SC population and Sample Registration System (SRS) Baseline Survey 2014. Attempts have been made to assess population ageing and related aspects among SC population in India and West Bengal and to compare those figures with the corresponding figures of total and ST populations in India and West Bengal by interpretations and explanations.

6.2 Population Ageing in India and West Bengal

Age-sex distributions of SC population in India and West Bengal are provided through the following population pyramids (Figures 6.1 and 6.2). The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an

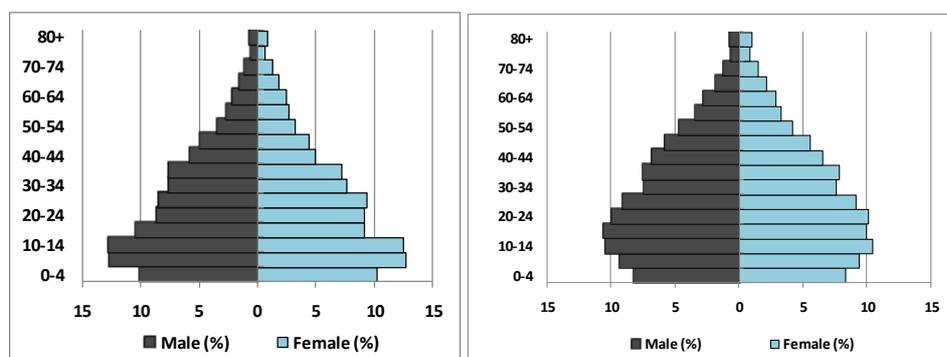
increase in the proportion of elderly population. Again, the rate of shrinking of population pyramid over 2001-2011 in case of Indian SC population is lesser than that in case of SC population of West Bengal indicates that the rate of increase of ageing in case of Indian SC population is lesser than SC population of West Bengal.



India (SC): 2001

India (SC): 2011

Figure 6.1: Population Pyramids for India (SC) for 2001 and 2011



West Bengal (SC): 2001

West Bengal (SC): 2011

Figure 6.2: Population Pyramids for West Bengal (SC) for 2001 and 2011

Per cent distribution of SC population by age groups according to Censuses of India, 2001 and 2011 along with per cent decadal growth rate of elderly persons in general and elderly population over 2001–2011 in India and West Bengal according to censuses 2001 and 2011 is provided in Table 6.1. It has been found that scheduled caste population aged between 0–14 years decreased over the years 2001–2011, but there are increasing trends in per cent of population for other age-groups. According to Census of India 2011, per cents of elderly persons to total population among total, SC and ST populations in India were 8.6, 7.8 and 6.9 respectively and respective figures in West Bengal were 8.5, 7.6 and 7.0. Therefore, per cent of elderly persons among SC population was in between total and ST population both in India and West Bengal. Per cent decadal growth rate of elderly SC population in elderly population over the 2001–2011 was almost same in India and West Bengal. Per cent decadal growth rate of elderly SC

population in general population is West Bengal was higher than that in India. Elderly females of SC population both in India and West Bengal had higher per cent of elderly persons to total population than elderly males. Per cent of elderly persons among SC population was higher than that among ST population, but lesser than that in the entire population.

Table 6.1: Per cent Distribution of Elderly Population by Age Groups Among SC Populations in India and West Bengal during the census years 2001 and 2011

		Age groups (years)						Per cent of decadal growth rate of elderly in general population 2001- 11	Per cent of decadal growth rate of elderly in elderly population 2001- 11
		0- 14		15 - 59		60 + (Per cent of elderly)			
		2001	2011	2001	2011	2001	2011		
India	Person	38.2	32.9	54.9	59.2	6.9	7.8	12.3	37.4
	Male	38.6	33.3	54.9	59.3	6.5	7.4	11.9	37.0
	Female	37.9	32.6	54.9	59.2	7.2	8.2	12.8	37.9
West Bengal	Person	35.3	28.1	58.3	64.3	6.4	7.6	15.1	38.5
	Male	35.3	27.9	58.9	64.9	5.8	7.2	15.4	42.7
	Female	35.3	28.2	57.7	63.7	7.0	8.1	14.8	34.8

Source: Censuses of India, 2001 and 2011 (Percentages were computed by researcher)

Per cent of elderly persons in the elderly age-groups 60-64, 65-69, 70-74, 75-79, 80- and 60+ among SC population in India and West Bengal is provided in Table 6.2.

Table 6.2: Per cent of Elderly in the Age-groups 60-64, 65-69, 70-74, 75-79, 80+ and 60+ among SC populations in India and West Bengal

		60-64	65-69	70-74	75-79	80+	60+
		India	Person	3.0	2.0	1.4	0.6
	Male	2.8	1.9	1.4	0.6	0.7	7.4
	Female	3.1	2.2	1.5	0.6	0.8	8.2
West Bengal	Person	2.8	2.0	1.3	0.7	0.8	7.6
	Male	2.7	1.9	1.2	0.6	0.7	7.2
	Female	2.9	2.1	1.5	0.7	1.0	8.1

Source: Census of India, 2011 (Percentages were computed by researcher)

Per cents of elderly persons were gradually decreasing over the different elderly age-groups 60-64 to 75-79, but increased in the oldest-old (80 years and above) age-group. About 1 per cent of female among SC population in West Bengal were aged 80 years and above, that figure is almost same in the total population. Among SC population both in India and West Bengal, per cents of elderly females were higher than those of

elderly males in all elderly age-groups indicating that there were more females than males in the elderly age-groups.

Sex ratio of elderly persons and general population among SC population in India and West Bengal according to Census of India 2011 is provided in Table 6.3. According to Census of India 2011, sex ratios of elderly persons among total, SC and ST populations in India were 1033, 1043 and 1120 respectively and respective figures in West Bengal were 1010, 1074 and 1130. In respect of sex ratios of elderly persons both in India and West Bengal, SC population was in between total and ST populations.

Table 6.3: Sex ratios of Elderly Among SC Population in India and West Bengal

	Age groups (in years)						All ages
	60-64	65-69	70-74	75-79	80+	60+	
India	1034	1051	988	1083	1133	1043	946
West Bengal	989	1068	1131	1160	1264	1074	951

Source: Census of India, 2011 (Sex ratios were computed by researcher)

It is observed that among SC population, sex ratios of elderly persons and of general population in West Bengal were higher than those in India except in the age-group 60-64 years. Sex ratio of elderly aged 80 years and above among SC population in West Bengal was 1264. Among SC population in India and West Bengal, sex ratios of elderly in all elderly age groups were above 1000 indicating there were more females than males in all elderly age groups (except that in the age group 70-74 years in India). From the figures of Tables 6.1-6.3, it may be inferred that among SC population in India and West Bengal, elderly females are living more years than elderly males, even at ages 80 years and above.

Per cent distribution of households by number of elderly members in the households among total, general (excluding SC and ST), SC and ST populations in India according to Sample Registration System (SRS) Baseline Survey, 2014 is provided in Table 6.4.

Table 6.4. Per cent Distribution of Households by Number of Elderly Members in Households Among SC Population in India (as on 1.1.2014)

Category	Number of elderly members			
	None	1	2	3+
Total	75.7	16.5	7.6	0.3
General (excluding SC and ST)	74.8	17.0	8.0	0.3
SC	77.3	15.8	6.7	0.2
ST	79.5	14.3	6.0	0.2

Source: SRS Baseline Survey, 2014

In India, per cent of households having at least one elderly family member among SC population was lesser than that among general (excluding SC and ST) population, but was higher than that among ST population.

Per cent distribution of households among the households having at least one elderly family member with at least one family member aged 18–59 years by social groups in India according to Sample Registration System (SRS) Baseline Survey, 2014 is provided in Table 6.5. In India, among all social groups and the households having at least one elderly family member, nearly 80 per cent of households had at least one family member aged 18-59 years (normal working age group) which is a good indicator for the social security and well-being of the elderly persons, in India, among SC population, that figure was least in rural areas and highest in urban areas indicating among SC population, elderly persons in urban areas were in a better position in respect of social security and well-being than those in rural areas.

Table 6.5. Per cent Distribution of Households with at least One Family Member Aged 18–59 Years among Households having at least One Elderly Family Member by Social Groups in India (as on 1.1.2014)

Category	Total	Rural	Urban
Total	81.3	80.1	84.8
General (excluding SC & ST)	81.4	80.2	84.7
Scheduled Castes (SC)	80.3	79.2	85.2
Scheduled Tribes (ST)	81.6	81.1	84.7

Source: SRS Baseline Survey, 2014

As per Census of India 2011, among SC population in India and West Bengal, per cent of working elderly persons (main worker + marginal worker) is provided in Table 6.6. The situation of working elderly persons among SC population in West Bengal was less compared that in India. Only 7.7 per cent of elderly females of SC population in West Bengal were working. According to Census of India 2011, per cents of working elderly persons (a) in total populations of India and West Bengal were 41.6 and 31.3 respectively, (b) in SC populations of India and West Bengal were 45.4 and 26.2 respectively and (c) in ST populations of India and West Bengal were 54.4 and 38.5 respectively.

Table 6.6. Per cent of Working Elderly Among SC Population in India and West Bengal

	Person	Male	Female
India	45.4	63.0	28.5
West Bengal	26.2	46.0	7.7

Source: Census of India, 2011 (Percentages were computed by researcher)

Again per cent of elderly persons among SC population in India and West Bengal were lesser than those among ST population in India and West Bengal.

As per Census of India 2011, per cents of currently married elderly persons among SC population in India and West Bengal is provided in Table 6.7. According to Census of India 2011, per cents of currently married elderly persons (a) in total populations of India were 82.1 (male), 49.6 (female) and of West Bengal were 85.7 (male), 39.9 (female), (b) in SC populations of India were 81.0 (male), 47.5 (female) and of West Bengal were 86.1 (male), 35.6 (female) and (c) in ST populations of India were 79.6 (male), 46.4 (female) and of West Bengal were 78.8 (male), 33.6 (female). Among SC population, per cent of currently married elderly males in West Bengal was higher than that in India, but the reverse was in case of currently married elderly females. Per cent of currently married elderly persons among SC population was higher than that those among ST population in both India and West Bengal. Per cent of currently married elderly persons among SC population was lesser than those among total population in both India and West Bengal (except that of elderly males).

Table 6.7. Per cent of Currently Married Elderly Among SC Population in India and West Bengal

	Person	Male	Female
India	63.9	81.0	47.5
West Bengal	60.0	86.1	35.6

Source: Census of India, 2011 (Percentages were computed by researcher)

Distribution of number of disabled persons per 1000 elderly persons among SC population in India and West Bengal is provided in Table 6.8. According to Census of India 2011, numbers of disabled persons per 1000 elderly persons (a) in total populations of India and West Bengal were 52 and 47 respectively, (b) in SC populations of India and West Bengal were 60 and 53 respectively and (c) in ST populations of India and West Bengal were 65 and 55 respectively. Numbers of disabled persons per 1000 elderly persons among SC population in West Bengal were not higher than those in India except for multiple disabilities. Situation of disabilities of elderly persons among SC population in India and West Bengal was in between those among total and ST populations.

Table 6.8: Distribution of Number of Disabled Persons per 1000 Elderly Among SC Population in India and West Bengal

	Disability Type								
	Total Disabilities	In Seeing	In Hearing	In Speech	In Movement	Mental Retardation	Mental Illness	Any Other	Multiple Disabilities
India	60	16	11	1	15	1	1	9	7
West Bengal	53	15	9	1	11	1	1	8	8

Source: Census of India, 2011 (Numbers were computed by researcher)

Per cent distribution of literacy of elderly persons among SC population in India and West Bengal according to sex for the Censuses of India, 2001 and 2011 is provided in Table 6.9. According to Census of India 2011, per cents of literate elderly persons (a) in total populations of India were 59.1 (male), 28.5 (female) and of West Bengal were 70.0 (male), 37.1 (female), (b) in SC populations of India were 41.9 (male), 13.1 (female) and of West Bengal were 56.1 (male), 17.9 (female) and (c) in ST populations of India were 35.3 (male), 10.8 (female) and of West Bengal were 38.3 (male), 8.5 (female). Literacy level of elderly persons among SC population in West Bengal was higher than that in India both in Censuses of India 2001 and 2011. There was a tremendous improvement of literacy level over 2001–2011 both in India and West Bengal. Literacy level of elderly females among SC population remained very less compared to that of elderly males. Literacy level of elderly males as well as females among SC population remained higher both in India and West Bengal compared to that among ST population. But literacy level of elderly persons among SC population was very less than that among all population. Per cent decadal growth rates of literacy among elderly males of SC population were almost double of those among elderly females of SC population. Thus, females were always lagging behind male population which is a matter of concern.

Table 6.9: Per cent Distribution of Literacy Among Elderly in India and West Bengal According to Sex Among SC Population

		Person	Male	Female
India	2001	20.0	33.3	7.1
	2011	27.2	41.9	13.1
	Per cent of decadal growth	46.6	65.1	29.2
West Bengal	2001	31.4	53.9	11.7
	2011	36.3	56.1	17.9
	Per cent of decadal growth	49.1	61.4	35.8

Source: Censuses of India, 2001 and 2011 (Percentages were computed by researcher)

6.3 Summary

In the present chapter, we explained data relating to population ageing among SC population in India and West Bengal. Population pyramids on SC population for India and West Bengal in Censuses of India 2001 and 2011 have been presented here. Remarkable shrinkages of pyramids on SC population over years 2001–2011 indicates a decline in fertility leading to an increase in the proportion of elderly population.

Findings based on this chapter are presented below:

- (i) The percentage shares of SC population to total population in India and West Bengal are 16.6 and 23.5 respectively. Top two districts in West Bengal with respect of SC populations are Cooch Behar and Jalpaiguri having 50.2 and 37.7 per cent SC population to total populations respectively; both of them belong to North Bengal.
- (ii) Per cent literacy rate and per cent work participation of SC population of all ages in India were 56.5 and 38.5 respectively. Effective reproductive span (years) of total, general (excluding SC and ST), SC and ST populations in India were 6.6, 6.3, 7.0 and 7.3 respectively.
- (iii) It is observed that among SC population, sex ratios of elderly persons and of general population in West Bengal were higher than those in India except in the age-group 60-64 years. Sex ratio of elderly persons aged 80 years and above among SC population in West Bengal was 1264. There is an increasing trend in population ageing among females of SC population, same pattern is happening in the entire population in India and West Bengal.
- (iv) Per cent of households without any elderly family members were 68.7 and 69.6 in India and West Bengal respectively, whereas that figure were 77.3 and 79.5 among SC and ST populations respectively in India (as on 1.1.2014). Reason behind the fact that percentages of elderly persons among SC and ST populations were less compared to that in the entire population is that socio-economic conditions of SC and ST populations were less developed compared to those of the general population.
- (v) Nearly 80 per cent of households in India among all social groups were having at least one member aged 18-59 years (normal working age group) among households having at least one elderly family member. This is a good indicator for the security and well-being of elderly persons in India.
- (vi) In rural areas, per cent of elderly persons among SC population was the lowest among all categories and in urban areas, per cent of elderly persons among SC population was the highest among all categories, reasons behind these were low level education, income and living standard among SC population in rural areas than those in urban areas.

- (vii) Per cent of currently married elderly males among SC population in West Bengal was higher than that in India, but the reverse was in case of currently married elderly females among SC population. Per cent of currently married elderly persons among SC population was higher than that those among ST population in both India and West Bengal.
- (viii) Numbers of disabled persons per 1000 elderly persons among SC population in West Bengal were not higher than those in India except for multiple disabilities. Situations of disabilities of elderly persons among SC population in India and West Bengal were almost similar to elderly persons among ST population in India and West Bengal. Situations of disabilities of elderly persons among SC population in India and West Bengal were worse to elderly among all population in India and West Bengal.
- (ix) There was a tremendous improvement of literacy level over 2001–2011 both in India and West Bengal. Literacy level of elderly females among SC population remained very less compared to that of elderly males. Literacy level of elderly males as well as females among SC population remained higher both in India and West Bengal compared to that among ST population. But literacy level of elderly persons among SC population was very less than that among all population. Per cent decadal growth rates of literacy among elderly males of SC population were almost double of those among elderly females of SC population. Thus, females were always lagging behind males which is a matter of concern.
- (x) It may be inferred from our findings that in both India and West Bengal, in context of magnitude of population ageing, social security and well-being of elderly persons; SC population was in a better position compared to ST population, but in a worse position compared to total population. Therefore, population ageing is highly positively correlated with socio-economic condition of the population which again establishes the Preston's hypothesis that individuals born in richer countries, on an average, can expect to live longer than those born in poor countries.

CHAPTER 7

CONSTITUTIONAL PROVISIONS AND GOVERNMENT PROGRAMMES AND POLICIES FOR THE SOCIAL SECURITY OF ELDERLY PERSONS IN INDIA AND WEST BENGAL

7.1 Introduction

Population ageing is worldwide and increasing phenomenon and India is no exception. With fast changing socio-demographic-economic scenario, industrialization, rapid modernization and urbanization, higher ambitions among the youth and the increasing participation of females in the workforce, roots of traditional joint family system have been disappearing very fast from the society. When the elderly persons need family support most, they have to live on their own efforts and means, even basic needs and rights of many of them are not met. Social marginalization, loneliness, isolation, negligence, deprivation, harassment etc in their elderly age and even attempt to possess forcefully and unlawfully of properties of elderly persons and in some extreme cases, murder of elderly persons lead to violation of Human Rights of them.

The right to social security ensures that everyone, regardless of age, gender, caste, community, race, religion, locality of residence or ability to work etc is guaranteed the means necessary to procure basic needs and services. Three key human rights principles are fundamental to guaranteeing the right of social security: (a) comprehensiveness (social security covers all the risks involved in the loss of means of subsistence for reasons beyond person's control), (b) flexibility (the retirement age should be flexible depending on the occupations performed, the working ability, knowledge and experience of the persons, with due regard to demographic, economic and social factors) and (c) non-discrimination (social security must be provided without discrimination based on health status, race, ethnicity, age, gender, disability, religion, national origin, income or social status etc).

“Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality” included in the Article 22 of the UN 1948 Universal Declaration of Human Rights emphasizing that social security is an important part of human rights and every nation agrees on

(United Declaration of Human Rights <http://www.un.org/en/documents/udhr/index.shtml>, 1948). Again, the document 'UN Principles of Ageing' (1982) is considered the basic guideline for promotion of the rights of elderly persons. The five principles related to it are (a) Independence: Elderly persons should have access to adequate needs: food, water, shelter, clothing and health care through the provision of income, family and community support and self-help. They should have the opportunities to work or to have access to other income-generating opportunities; (b) Participation: Elderly persons should remain integrated in the society and participate actively in the formulation of policies which affect their well-being; (c) Care: Elderly persons should have access to health care to help them maintain the optimum level of physical, mental and emotional well-being; (d) Self-Fulfilment: Elderly persons should be able to pursue opportunities for the full development of their potential and have access to educational, cultural, spiritual and recreational resources of society and (e) Dignity: Elderly persons should be able to live with dignity, peace and security and should be free from exploitation and mental and physical abuse.

Unfortunately, in India, elderly persons are not aware of their human rights due to high predominance of illiteracy and lack of awareness of their rights. On the other hand, due to relatively high physical as well as psychological vulnerability, their cries for help remain within four-walls, as a result, only a few cases of violation of human rights of elderly persons become known to the society. In general, the rights for the elderly persons restrict from the principles of dignity and non-discrimination. The rights of elderly persons can be grouped into three main categories: protection, participation and image. Protection refers to securing the physical, psychological and emotional safety of elderly persons with regard to their unique vulnerability to abuse and ill treatment. Participation refers to the needs to establish a greater and significant active role for elderly persons in the society (which is related to active ageing). Image refers to the needs to define a significant positive, less degrading and discriminatory idea of their identity and capabilities (Age-well Research & Advocacy Centre, 2014). Rights related to the elderly persons are (a) right to dignity; (b) right to freedom from abuse, neglect, or exploitation; (c) right to freedom from discrimination; (d) right to adequate healthcare; (e) right to maintenance; (f) right to material assistance; (g) right to property; (h) right to participation in society; (i) right to work duties; duty of third-party caretakers, duty of the family, duty of the state etc.

A policy is a principle of action or rule to guide decisions and achieve rational outcomes. It is an intention, and is implemented as a procedure. It aims to the process of making important institutional decisions, including the identification of different alternatives such as programmes of spending priorities, and choosing best possible (optimum) alternatives among them on the basis of the impact they will have on the individuals, society etc. Policies may be considered as social, political, economical, management, financial and administrative mechanisms etc arranged to achieve explicit goals. For a developing and vast country like India, population ageing may impose gigantic pressures on social security (social assistance and social insurance) including pension outlays, health care expenditures, fiscal discipline, savings etc. Elderly persons face the most urgent needs for providing care to them in a planned, comprehensive and coordinated manner (Sharma, N. (2014).

The task of implementing the policies and programmes is a national responsibility, involving combined efforts of the government, non-government organizations (NGOs), local bodies and other social units. It should be made mandatory for all participating ministers, departments, central and state governments, local bodies and NGOs to accelerate and participate in the programmes concerned with the welfare of elderly persons. A governance structure for implementing the policies and programmes for the welfare of the elderly persons requires to be put in place which provides for transparency, accountability, evaluation and monitoring of performance etc and also provides a fair amount of autonomy. The goals of the policies and programmes for elderly persons are the well-being for them aiming to help them to live at the last phase of their life and up to their last breathing with purpose, dignity, healthy and peace. The policies would be such that the nation would extend support for financial security, health care, shelter, protection against abuse and exploitation, welfare, make available opportunities for their potential development, seek their participation, provide them services etc so that they may improve the quality of their lives and other requirements for them (Sharma 2014).

Indian social system recognizes family as one of the institutions that meets the social, economic and emotional and other needs of the elderly persons. In Indian society, elderly person has a better status on account of the value systems. Their wisdom and experience give them their authority. In that system, there exists a certain amount of love, respect and care etc for the elderly persons (Chakraborty 2014).

Till today, a high share of population in India, live below the poverty line (BPL), work in the informal sector, have inadequate earnings, leisure and leave giving little scope to save for a majority of households. As per Census of India 2011, nearly 54 per cent of the workforce is engaged in agriculture. With nearly 60 per cent rural households not having bank accounts (in recent times, this situation has been changed somehow), a large majority of the elderly persons will continue to rely on their children and family members for old age security. However, the forecast of further decline in fertility, which will result in an increase in the elderly dependency ratio, suggests that future working age adults will increasingly find it difficult to financially support their elderly family members (Kulkarni et al, 2014).

Elderly Law refers to the area of legal practices pertaining to issues that affect elderly persons. The three focuses of elderly law include estate planning; Medicaid, disability and long-term care; guardianship etc. Attorneys who work in the field of elderly law bring more to their practice than an expertise in the appropriate area of law. They have knowledge of elderly persons and their unique needs as well as the myths related to competence and population ageing. They are aware of the physical and mental difficulties that often accompany the ageing process. The International Day of Older Persons is October 1 of every year and World Elder Abuse Awareness Day is June 15 of every year.

The two main objectives of the present chapter are to review the constitutional provisions for the elderly persons in India and to analyse the government programmes and policies for the welfare of elderly persons in India and West Bengal. It also provides ideas on lessons on social security relating to the elderly persons for India from other countries particularly Japan (a country with highest share of elderly persons). Information for the chapter is data based on some published research papers, the Internet etc.

7.2 Indian Constitutional Provisions for Elderly

In the Constitution of India, entry 24 in list III of Schedule VII deals with the “Welfare of labour, including conditions of work, provident funds, liability for workmen’s compensation, invalidity and old age pension and maternity benefits. Further, Art. 41 of Directive Principles of State Policy has particular relevance to Old Age Social Security”. Art. 41 of Indian Constitution deals with the State’s role in providing social security to the elderly persons. According to this article, “The State shall, within the limits of its

economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in case of unemployment, old age, sickness and disablement and in other cases of undeserved want” (Constitution of India (1949) <http://www.india.gov.in>).

The Right to life, recognized as a fundamental right by Article 21 of the Constitution of India, implies the right to live with human dignity of people. It encompasses not only the security regarding the basic human needs of food, clothing and shelter etc, but also health security. Social security schemes usually give priority to income security because, generally, the basic needs of the vulnerable sections, particularly elderly persons may be satisfied, if people have an adequate income (Kulkarni et al, 2014).

Item No. 9 of the State List and item 20, 23 and 24 of the Concurrent List relate to old age pension, social security and social insurance and economic and social planning. The right of parents, without any means, to be supported by their children having sufficient means has been recognized by Section 125 (1) (d) of the Code of Criminal Procedure 1973, and Section 20(3) of the Hindu Adoption and Maintenance Act, 1956.

The Maintenance and Welfare of Parents and Senior Citizens Act, 2007 makes it as a legal obligation for the children and heirs to provide maintenance to the elderly persons. The concept of right to healthcare, which evolved from the right to life is getting acceptance in the present Act. It creates a positive duty on the part of the state governments to establish old age homes in every district (Nayak et al 2011, Sharma 2014, Age-well Research & Advocacy Centre 2014).

7.3 Legal Measures

As per Section 125 of the Criminal Procedure Code, 1973, if any person refuses or neglects to maintain his/her parents, then a magistrate may order such a person to make a monthly allowance for the maintenance of his/her parents at a monthly rate not exceeding Rs 500.

The Hindu Adoption and Maintenance Act, 1956 enjoins children to look after their parents if parents are unable to maintain themselves out of their own earnings or other properties. The Act is applicable to Hindus only. It defines maintenance as

providing of food, clothing, residence, medical attendance and treatment etc. Here, the amount is left to the discretion of the court.

According to the codified Muslim Law, children are required to maintain parents and paternal and maternal grandparents, if they are poor and cannot take care of themselves.

The Christians and Parses have no personal laws providing for maintenance for the parents. Parents who wish to seek maintenance have to apply under provisions of the Criminal Procedure Code.

The Central Government introduced a bill in Parliament for better care of elderly persons in India. The bill titled “Older Persons (Maintenance, Care and Protection) Bill 2005” is intended to make relief simpler, speedier and less expensive. The bill has taken into account three thrust areas for legislation, namely, Maintenance, Care and Protection. Maintenance includes financial, housing requirement, protection of life and property, recreational and spiritual needs and grievance redressals etc. Maintenance from family will hitherto be a matter of right for the elderly persons. Care includes financial, housing requirement, clothing requirement, health requirement and companionship requirement etc from families and/or the state government in case of persons without family support or living below the poverty line (BPL). Protection includes protection of life and property of the elderly persons against exploitation including physical and mental abuse (Sharma 2014, Age-well Research & Advocacy Centre 2014).

Elderly persons can get priority hearing in courts: For the convenience of elderly persons, Mumbai High Court has decided to give priority in its roster to the cases where at least one of the parties is above sixty years old, if such a request is made by the concerned party.

Maintenance Tribunal can order eviction of adult children in cases of parental abuse: Delhi High Court- directions to remove the children from the property are necessary in certain cases like the present to ensure a normal life of the senior citizens, the Court said.

7.4 Programmes and Policies for Welfare of Elderly in India

The Ministry of Social Justice and Empowerment is the nodal Ministry for the welfare of elderly persons. The Ageing Division in the Social Defence Bureau of the Department of

Social Justice and Empowerment develops and implements policies and programmes for the elderly persons in close collaboration with state governments, NGOs and civil society etc. The Government of India (GOI) announced a National Policy on Older Persons (NPOP) in 1999. National Council for Older Persons (NCOP) (reconstructed and renamed as National Council of Senior Citizens (NCSrC) in 2012) has been constituted by the Ministry of Social Justice and Empowerment to operationalise the NPOP. The Ministry has also launched a project called “Old Age Social and Income Security (OASIS)”. An Expert Committee is constituted under the project. In order to facilitate implementation of the National Policy, and to bring about a qualitative improvement in the programme intervention of the Ministry, on-going schemes were revised during 1998-1999.

The Nodal Ministry implements the Central Sector Scheme of Integrated Programme for Older Person (IPOP). Under the scheme, financial assistance up to 90 per cent and in case state 95 per cent of the project cost is provided to Government/ Non-Governmental Organizations/ Panchayati Raj Institutions/ local bodies etc for constructing and maintaining old age homes, day care centres and mobile medicare units. Several innovative projects have been added as being eligible for assistance under the Scheme, some of these are Maintenance of Respite Care Homes and Continuous Care Homes, Running of Day Care Centres for Alzheimer's Disease/ Dementia Patients, Physiotherapy Clinics for elderly persons, Help-lines and Counselling Centres for elderly persons, Regional Resource and Training Centres, Training of Caregivers to the elderly persons, Awareness Generation Programmes for Older Persons and Care Givers, Formation of Senior Citizens Associations etc. Scheme of Assistance to Panchayati Raj Institutions/ Voluntary Organisations/ Self-Help Groups for Construction of Old Age Homes (OAHs)/ Multi Service Centres for Older Persons has been revised to enhance the one time construction grant for the old age homes/ multi service centres from Rs 5 lakhs to Rs 30 lakhs to eligible organizations.

The National Social Assistance Programme (NSAP) is a welfare programme being administered by the Ministry of Rural Development. The programme is being implemented in rural areas as well as in urban areas. The Government of India launched NSAP as a centrally sponsored scheme with effect from August 15, 1995. It includes two schemes relating to elderly persons:

- National Old Age Pension Scheme (NOAPS): Under the scheme, destitute aged 65 years and above are entitled to a monthly pension ranging over Rs 200/= to Rs 1000/=. At present, 18 states/UTs are providing NOAPS. The amount of NOAPS for West Bengal is Rs 500/=. National Old Age Pension Scheme was renamed as Indira Gandhi National Old Age Pension Scheme (IGNOAPS) (Indira Gandhi National Old Age Pension Scheme given in Appendix-D.1),
- National Family Benefit Scheme: The benefit under the scheme to BPL household is lump sum amount of money on the death of primary breadwinner aged between 18 and 64 years. The ceiling of the benefit is Rs 5,000/= for death due to natural cause and Rs 10,000/= for accidental death (National Family Benefit given in Appendix-D.2),
- **National Initiative on Care for Elderly (NICE)**
NICE was launched in 2000 by the National Institute of Social Defence (under MOSJE), which conducts various courses to prepare skilled and committed professionals to provide services to the elderly persons.
- **National Programme for the Health Care for the Elderly (NPHCE)**
Under National Health Mission (NHM), NPHCE was launched by the Ministry of health and family welfare, during the 11th plan period to: i) provide preventive, curative and rehabilitative services to the elderly persons at various levels of the health delivery system, ii) strengthen the referral system, and iii) develop specialised manpower and promote research on geriatric diseases. Under the National Programme for the Health Care of Elderly (NPHCE) scheme, financed in the ratio of 80:20 by centre and the state, provision is made for geriatric infrastructure, geriatric wards and OPDs in hospitals, mobile units and regular geriatric clinics. There are two special Sub-Plans: (a) Scheduled Caste Sub-Plan (SCSP) and (b) Tribal Sub-Plan (TSP).

Different privileges and benefits provided to elderly persons in India are:

- The Union Minister for Finance and Corporate Affairs, while presenting the General Budget in Parliament on 1st February, 2017 said that for elderly persons, Aadhar based Smart Cards containing their health details would be introduced. A beginning would be made through a pilot in 15 districts during 2017-2018.

- Old Age Pension for the general public (Old Age Pension for the General Public given in Appendix-D.3),
- National Old Age Pension scheme (NOAPS),
- Old Age and Widow Pension in West Bengal, Maharashtra, Karnataka, Kerala,
- Annapurna scheme under which free food grains (wheat or rice) up to 10 kg. per month are provided to destitute elderly persons of 65 years or above who are otherwise eligible for old age pension but are not receiving it,
- Pension and Family Pension with Dearness Relief, Gratuity, Leave Encashment along with enhanced Pension after attaining certain ages (provided in Table 7.1) (in case of central/state government permanent employees),

Table 7.1: Enhanced rates of pension

After attaining age (year)	Enhanced rate (per cent of pension)
80	20
85	30
90	40
95	50
100	100

Source: Ministry of Personnel, Public Grievances and Pensions (Department of Pension and Pensioners' Welfare) Resolution New Delhi, the 29th August, 2008

Reasons behind providing enhanced rates of pension to the pensioners in their oldest-old ages because in oldest-old ages; costs for food, clothing, recreation and accommodation etc decrease, but costs for medicine, health care and maintenance etc increase as age increases, therefore the pensioners at their oldest-old ages are provided enhanced rates of pension to stabilize maintenance of social security of elderly persons.

- Bank loans for Pensioners and Family Pensioners,
- Income Tax Rebate (Section 88B),
- Deduction in respect of medical insurance premium (Section 80D),
- Deduction in respect of medical treatment (Section 80DDB),
- Insurance Schemes for elderly through LIC: Jeevan Dhara, Jeevan Akshay, Jeevan Suraksha, Bima Nivash, Varishtha Pension Bima Yojana,
- Senior Citizens Unit Plan (SCUP),
- Senior Citizen Savings Scheme (SCSS) through Indian Post offices, banks (public like SBI, Private like ICIC) with Income Tax benefit (Section 80C),
- Medical Insurance Scheme,

- Group Medical Insurance,
- Jan Arogya,
- Reverse Mortgage Loan (RML),
- Concessions on travelling by road, train, air,
- Special Counters/ Separate Queue: Railway Ticket Booking, Income Tax Return, Electricity bill, hospital, bank,
- Old Age Homes (OAH),
- Helpline,
- Expeditious Disposal of Court Cases,
- Mobile Medicine Unit Programme,
- Geriatric clinics in several government and non-government hospitals,
- Banking with high return, home services, Special Senior Citizen ID card, Free International Debit Cards for Primary and Joint Accounts Holders, Customized Loan Offerings, Free Foreign Outward Remittances, Faster Inward Remittances, Faster Credit for collection of Foreign Cheques, Free Collection of outstation Cheques etc,
- Concessions at restaurants, hotels etc,
- Separate and/or Special Seating arrangements at train, bus, bank etc,
- Increase in retirement age and provisions of recruitment after retirement on semi-permanent/contractual/casual basis etc (Nayak et al 2011, National Institute of Rural Development & Panchayat Raj).
- Union Budget 2018 does well to focus on elderly persons : (a) a five-fold increase in the exemption limit on interest income from savings, fixed and recurring deposits held with banks and post offices to Rs 50,000/=, (b) raising the annual income tax deduction limit for health insurance premium and/or medical reimbursement to Rs 50,000/= to all elderly persons, (c) moving to set the ceiling for deduction in lieu of expenses incurred on certain critical illnesses to Rs 1 lakh, irrespective of the age of the elderly persons and (d) extending the Pradhan Mantri Vaya Vandana Yojana by two years, up to March 2020, and doubled the capital on investment in the scheme to Rs 15 lakh – this annuity-cum-insurance scheme entitles the senior citizen policyholder to a guaranteed pension that equates to an annual return of 8% on investment is contributory and is run by the Life Insurance Corporation of India (Limited succor: Budget 2018 and Senior citizens, The Hindu, February 05, 2018).

Programmes and policies for the social security for the elderly persons in India are not adequate and well-planned compared to the developed countries like Japan. Social security systems in Japan are framed to guarantee a minimum standard of living and to protect citizens from social and economic risks. Japan's social security system consists of four major components: (a) public assistance, (b) social insurance, (c) social welfare services and (d) public health maintenance. With its rapid growth of population ageing and increase in life expectancy, the issues of how to pay for and retain the growing pension, medical care and nursing, care burden have become critical. The major distinguished features of Japan's social security systems are as follows:

- Japan was a nation to have made active and effective efforts to develop its social security system when it still had a large informal sector population,
- Japan developed a government-led social security system in which the government becomes the insurer for the people,
- Japan developed a universal insurance system,
- Japan developed a system where the proper interaction between private and public agencies leading to co-operate,
- In view of certain increasing constraints like rapid change in demographic profile, fiscal constraint, high unemployment, increasing inequality in income distribution etc, Japan has to restructure its social security systems.

In India, with the increasing demographic behavior of population and because of the increasing erosion of traditional family living arrangements, particularly in urban areas; certain issues arising to be considered: (a) there are a significant proportion of people belonging to unorganized sector without any social security net, (b) increase of elderly persons raised the issue of increasing burden of old-age dependency in the economy and (c) poverty among elderly persons continues to be an increasing problem. India requires a well conceived social and health security system for the elderly persons (Misra 2010).

7.5 Pension Systems in India

There are three major components to the Indian pension system: civil servants pension, the mandatory pension programmes run by the Employees' Provident Fund (EPF) Organisation of India and the unorganised sector pension called the National Social Assistance Programme (NSAP).

The State of Uttar Pradesh has implemented E-pension system which allows filling up of pension forms, checking, verification and payment using an online system.

India does not have a universal (unique) social security system. A large number of India's elderly persons are not covered by any pension scheme. Pension reforms and a pension system with greater reach will not only ensure citizens' welfare in their golden years but will also help the central and state governments cut their future liabilities. With these broad objectives in mind, the government of India set up an expert committee in 1998 to devise a new pension system for India. It recommended creating a pension system based on individual retirement accounts (IRAs). An individual would save and accumulate assets through his entire working life for future. Upon retirement, the individual would be able to use his pension assets to buy annuities from annuity providers and obtain a monthly pension. The pension amount would be governed by what the employees' pension fund account could earn from market investments. In line with the recommendations, the government set up its New Pension System (NPS). The NPS was launched in 2004 for central and state government employees, who had to subscribe mandatorily. In 2009, it was thrown open to all Indian citizens in the 18-60 age groups. However, it has failed to take off in the voluntary segment given the anaemic subscriptions from the private sector.

All governments (central/state) are shifting to NPS for their civil servants, but Government of West Bengal has not yet considered it.

India needs sustainable pension system. The social security system in India has a big hole – an inadequate and disjointed pension system. “Pension schemes are engines of growth in many European countries and it can be so for India too.”, said Jan Nijssen, ING's global head pensions and CEO, Central Europe Insurance (Business Standard, Bangalore 2004).

Micro Pension: Micro Pension, a new venture for social security is aimed at low-income people who are generally financially illiterate and have very limited access to financial services like banks, insurance offices etc. This product is affordable for people working in the informal economy. This is the sought-after solution to create a more secure financial future to contribute to the prevention of elderly age poverty. By saving during one's active working period, people will be better financially supported when they reach elderly age and cannot rely on working anymore to provide themselves with financial support. Small amounts of money can be saved individually and invested collectively to grow benefits for future. On the agreed withdrawal date, the accumulated capital can be paid out in lump sum or periodically via an annuity. Some examples of

micro pension Axis Mutual Fund, Bharti Axa, Sahara Daily Fund etc. According to Indian incomes, savings and retirement Survey, ADB 2005, the table below (Table 7.2) shows workers and coverage under the pension scheme in India.

Table 7.2: Indian Pension Coverage

Pension Coverage	Number of Paid Workers (in million)	Percentage
Civil Service Pension	30	6.67
New Pension Scheme	02	0.44
Social Assistance	11	2.44
Private Employees	20	4.44
Excluded Workers	387	86.00
Total Workforce	450	100

Source: Indian incomes, savings and retirement Survey, ADB 2005

Excluded workers belonged to informal sector.

Atal Pension Yojana (APY) for Social Security: Financial inclusion and a universal social system have been high on the Indian government's agenda. This pension scheme was proposed in the Indian Union Budget 2015-2016 to work towards creating a universal social system for all Indians that would ensure that no Indian citizen would have to worry about illness, accidents or penury etc in elderly age. The scheme intends to bring pension benefits to people of the unorganized sector so that they can enjoy social security with a minimum contribution per month. People who work in the private sector or are employed in occupations that do not provide them the benefit of pension can apply for the scheme. They can opt for a fixed pension of INR (Indian Rupees) 1,000/= or 2,000/= or 3,000/= or 4,000/= or 5,000/= on attaining the age of 60 years. The amount of contribution and the individual's age will determine the pension. Upon the contributor's death, the spouse of the contributor can claim the pension and after the spouse's death the nominee will be returned the corpus accrued. The amount collected under the scheme is to be managed by Pension Funds Regulatory Authority of India (PFRDA) as per the investment pattern specified by the Government of India. Individual applicants will have no choice of pension funds or investment allocation. This scheme will bring social security to ageing Indians while at the same time promote a culture of savings and investment among the lower and the lower middle class sections of society. One of the greatest benefits of the scheme may be enjoyed by the poorer sections of the nation. The government of India has decided to contribute 50 percent of the user's contribution or the INR 1,000/= a year, whichever is lower, for a period of five years. This contribution will, be enjoyed only by those who are not income tax payers and those who join the scheme before 31 December, 2015. The scheme is open to all Indians between the age of 18 and 40 years. This allows an individual to contribute for at least 20 years before reaping the benefits of the scheme.

Any bank account holder who is not a member of any statutory social security scheme can avail of the scheme. All existing members of the government's "Swavalamban Yojana NPS Lite" will automatically be migrated to the APY. It will now replace the Swavalamban scheme, which did not gain much popularity across the country.

7.6 Professional Services to Elderly

Services related to elderly persons may be classified into two categories:

- a. Home care facility (old age home),
 - b. Elderly care services
- a. Home care facility (Residential/home facility)
 - (i) Elderly persons friendly home facilities,
 - (ii) Nursing care,
 - (iii) Social activities,
 - (iv) Health care,
 - (v) Tie up with hospitals for emergency care,
 - (vi) Nutritious food,
 - (vii) Housekeeping, laundry and security services,
 - (viii) Yoga and light physical activities,
 - (ix) Recreation,
 - (x) Providing associations etc.
 - b. Elderly persons care services

Under elderly persons care services, there are three kinds of offerings.

- (i) Home service: Providing assistance for housekeeping including sweeping, cleaning clothes and/or mopping laundry, ironing, shopping for household, cooking light meals and so on.
- (ii) Personal service: Providing assistance for maintaining personal hygiene viz. bathing, dressing, shaving, toileting, contingency care, medication needs and so on.
- (iii) Respite service: This refers to service for a short period of time providing rest and relief to family members who are assisting with the care of their elderly persons. Respite service includes both home and personal services.

Elderly person care profession is suitable to students of social sciences, social work education. Remarkable share of elderly persons suffer from life style disease like

diabetes, hypertension, heart and diabetes, hypertension, lung diseases etc. They need professional support/care for their doing daily activities. Elderly person care is therefore an upcoming profession for providing professional assistance for everyday living of elderly persons and requires more attention, dedication and commitment in addition to technical knowledge and experience relating to elderly persons.

Elderly persons care givers has more job potential in metropolitan cities. Earlier, the elderly persons care used to be the responsibility of their families. This practice is still intact in the rural areas. In urban areas, there have been a large number of elderly persons living without the familial support care. About 70 per cent of elderly persons live with one or multiple ailments require their Activities of Daily Living (ADL). These conditions have created a vast opportunity for short term and long term care givers, semi-qualified nursing assistants, day time carers and 24 X 7 carers etc. Keeping in view of these upcoming requirements, National Institute of Social Defence (NISD), the nodal ministry is engaged in training the eligible person on elderly/ Geriatric Care to generate pool of geriatric Care givers in order to assist the elderly persons in need of these cares. NISC has been training eligible persons on elderly/ Geriatric Care and also through its Regional Resources Training Centres (RRTCs) located at Delhi, Kolkata, Mumbai, Imphal, Bangalore, Hyderabad and Coimbatore. The Old Age Care Division of NISD is a unique institution which offers customized courses with a view to cater to the emerging needs of the elderly persons (Professional Courses offered by the Old Age Care Division of National Institute of Social Defence (NISD) given in Appendix-D.4).

7.7 Additional Policies and Programmes for Welfare of Elderly in West Bengal

The Government of West Bengal runs two exclusive housing schemes for BPL category – Gitanjali and Amar Thikana. In the rural areas more than 34,000 houses have been constructed under these two schemes. As per the administrative records, there are more than 4,000 elderly beneficiaries (National Institute of Rural Development & Panchayat Raj).

A scheme called “Project Pranam” a 24-hour helpline is initiated in 2009 to provide safety, security and medical assistances to elderly persons living alone through a venture of Kolkata Police and NGO “The Bengal”. It is a unique support mechanism wherein psychological and physical security supports are provided to the elderly persons in the city of Kolkata. Due to loneliness and health problems, most of the lonely elderly

couples or those who stay alone suffer from depression, which further pushes them to suicides at times. So to help them fight mental depression, this scheme arranges various camps, get together and sports activities etc. Ambulance facilities are provided during the time of emergencies. Hospitalisation is ensured for the caller when needed (Kolkata Police News Vol. 1 (8), June 2009).

The Government of West Bengal arranged provisions for pensions for the needy and elderly folk artistes through a project “Lokprasar Prkalpo”. There are many folk artistes in West Bengal, who used to perform in various programmes with reputation and attracted attention of the audiences. Most of them are now unable to perform because of their elderly age. They do not have definite source of income and there is nobody to look after them. The Government helps them and provides social security for them through “Lokprasar Prkalpo” (<http://www.westbengal.gov.in>) (Lokprasar Prkalpo given in Appendix-D.5).

e-pension is an initiative of The Directorate of Pension, Provident Fund and Group Insurance, Finance Department, Government of West Bengal to provide e-governance to the pensioners of recognized non-Government aided educational institutions, Panchayat, Municipality etc. The said online facility would bring in transparency and cut down delay in receiving pensions. At present, it takes around two to three years to receive a Pension Payment Order due to the manual nature of verification by different authorities. With the new e-pension portal, the whole process will be online and paperless, bringing total transparency and cutting down on time for processing. Gratuity would be paid immediately on the day of retirement and pension will be released in the bank account on the due date, that is, immediately after completion of first month after retirement. The new initiative is a part of the state government’s e-governance activity, which it undertook in 2012 (The Directorate of Pension, Provident Fund and Group Insurance, Finance Dept., Govt. of West Bengal).

There are total thirty-two old age homes for the poor and destitute run by the NGOs in different districts of the state. There is one government run old age home where political sufferers as well as destitute old-aged males and females are accommodated (<http://www.wbsc.gov.in/aboutus.htm>).

Old Age Pension (Indira Gandhi National Old Age Pension) granted to a person who is 65 years or more of age and is destitute in the sense of having little or no regular means of subsistence from his/her own sources of income or through support from the

family members or other sources. The amount of Old Age Pension was increased from Rs 100/= to Rs 400/= per month during the financial year (visit <http://wbprd.gov.in/HtmlPage/SSECURITY.aspx>).

The Department of Women Development and Social Welfare works towards the protection, equity and inclusion of populations that have been historically oppressed, neglected or excluded from development because of their gender, age, disability or situation. This includes women, elderly persons and other marginalized populations such as persons with disabilities, transgender persons, homeless persons and persons with drug / alcohol addiction. Social security is extended through Old Age Pensions, Widow Pensions and Disability Pensions. Apart from pensions, elderly persons in need can avail of shelter at various government homes. Under the West Bengal Maintenance and Welfare of Parents and Senior Citizens Rules, 2008, runs tribunals that hear cases of elderly persons who face harassment and eviction by their families (visit <http://wb.gov.in/portal/web/guest/women-and-social-welfare>).

Career mela for elderly persons in Kolkata: To help elderly persons to step into life second career options after retirement, the West Bengal Housing Infrastructure Development Corporation (WBHIDCO) is holding an elderly persons mela to help them train and choose career options. In the mela workshops are being held to help elderly persons learn on cooking and home delivery, IT and desktop publishing, handicraft and run a boutique, beautication course to run a beauty parlour. Seminars are being held on legal matters, developing writing skills and net publishing, home tourism, financial management etc (The Hindu March 2, 2014).

Free medical service for elderly persons in Kolkata: Bidhannagar Municipality has taken a decisive step to show the rest of country how to take care of the elderly persons. It has decided to take a unique initiative to provide free emergency medical services to the elderly persons who live alone in Salt Lake (The Times of India June 16, 2014).

7.8 Summary

In this chapter, different policies and programmes for welfare of elderly persons in India and pension systems in India including micro pensions and the Atal Pension Yojana have been highlighted in brief. This chapter has also highlighted, in brief, the job opportunities for services related to elderly persons in homes, in old age homes, hospitals etc. It has

also mentioned different professional courses relating to the services of the elderly persons. Additional policies and programmes for welfare of elderly persons undertaken by Government of West Bengal have also been pointed out here.

From our personal interactions with elderly persons and their family members relating awareness of constitutional provisions for elderly persons including legal measures, different policies and programmes for welfare of elderly persons in India and West Bengal etc, it may be inferred that majority of the elderly persons and their family members, even those of urban areas do not have any knowledge or have very less knowledge.

Elderly Law is not friendly to elderly in India. The murder of a 94-year old and his 64-year old daughter-in-law in Patel Nagar in Delhi on the eve of World Elder Abuse Awareness Day has reinforced the opinion that India is not a country friendly for the elderly persons. Even though there are laws that protect them, these are so badly publicized and implemented that a large section of those suffering cruelty at the hands of friends or strangers do not get any reprieve. But even today, say lawyers, awareness about the law and its provisions remain abysmally low; because of this, elderly persons continue to suffer mental and physical abuse from their children or kin. World Health Organisation's (WHO) report on 'Missing Voices' stated six key categories of elderly abuse, neglect and abandonment, disrespect and ageist attitudes, psychological, emotional and verbal abuse and legal and financial abuse. Delhi High Court lawyer Ajay Verma said, "There is no awareness among elders. That is also because rules/law is not highly prompted. Only literate people may be aware but what about the illiterate? They suffer badly. The government must advertise widely, hold special camps and come up with an online case filling system". Though lawyers have been kept out of the maintenance tribunals, many argue it has its disadvantages because the process remains technical. Once a complaint is filed, notices are issued, statements recorded and evidence gathered – all these require legal assistances (The Times of India June 15 2015).

A man along with his wife in Central Delhi area of Navi Kareem made the life of his parents miserable. Six years passed, but he and his wife, in spite of being barred, did not leave the house of his parents. The court ordered the son and the daughter-in-law to vacate the house and pay compensation. The elderly lady said her daughter-in-law poured kerosene on her and tried to burn her alive to occupy the house. Her son also threw boiling water on her. The Additional District Magistrate of the Hazari Court in his order said that the elderly lady and her husband were the legal owner of the property and the son and the daughter-in-law would have to vacate it (The Tribune October 14, 2016).

Although in a metropolitan city like Kolkata, a scheme called "Project Pranam" a 24-hour helpline was initiated in 2009 to provide safety, security and medical assistances

to elderly persons living alone, but the details of the scheme is not well advertised among the concerned people and the number of incidents of murders of elderly persons has been increasing day by day. One case of murder out of several murder and cheating cases in Kolkata may be mentioned as follows: one person Bappa was arrested on July 17, 2015 in connection with the double murder of an elderly couple (Pran Govinda Das and Renuka Das) living in an apartment in north Kolkata. Couple's daughter was working in USA. Bappa's wife Purnima was a maidservant in Das's family and was looking upon the said elderly couple. Bappa was also close to the Das's family and used to help the elderly couple in household stuff. In fact, Mr. and Mrs. Das helped Bappa with money, yet Bappa murdered them (Press Trust of India, Kolkata July 17 2015).

Such unfortunate incidents are numerous and have been happening both in rural and urban areas in India, particularly in metropolitan cities and surrounding areas. Elderly persons living alone or elderly couples living alone are the prime targets of criminals and opportunity seekers. Rules/laws for the elderly persons must be made friendly to elderly persons; above all, society must be liberal and sympathetic towards the elderly persons who are store houses of experience and wisdom and have rendered their services throughout their life to the society and reached at their last phase of life.

CHAPTER 8

SUMMARY OF FINDINGS, CONCLUSIONS AND SUGGESTIONS

8.1 Summary of findings

The research study entitled “**Population Ageing in West Bengal with Special Reference to Social Security**” begins with an introduction of the concept of population ageing and its related issues in the World and India in Chapter 1. It includes (a) the inevitable prospect of population ageing, (b) social security and elderly persons related social security, (c) statement of the problem, (d) historical development of the study area, (e) significance or scope of the study, (f) objectives of the study, (f) research questions and hypotheses, (g) research methodology, (h) limitations of the study and (i) chapterization of the research thesis. Population ageing is basically a two-dimensional demographic transformation: the decline in overall mortality results in longer life-expectancy and decline in fertility results in decreasing the proportion of children and young adults in the population. The process of population ageing may be categorized into relative ageing and absolute ageing. Relative or bottom-up ageing implies a growing proportion of elderly persons caused by fertility decline and dwindling youth base in the age composition, proportion of elderly persons grows as a per cent of total population even if their numbers did not change at all. Absolute or top-down ageing is the result of a real prolongation of lifespan raising the absolute number of elderly. Population ageing has serious impact on every aspect of society in developed and developing countries. Majority of the elderly persons suffer a lot of insecurities relating to their health, livelihood, shelter, love, care etc and like to be an essential member of their households and societies etc. The Preston Curve indicates that individuals born in richer countries, on average, can expect to live longer than those born in poor countries. The link between ageing and development is wide ranging. Ageing is a ‘triumph of civilization’ and it is an important determinant of economic development.

Information on how caste, religion and other factors affect the wellbeing of elderly in India is very limited. Population ageing is less among Scheduled Castes and Scheduled Tribes and Muslims than that of the population as a whole. The improved and up-to date information on population ageing and its different aspects and their study and analysis are highly required for the policy makers in formulation, evaluating goals, development and implementation of programmes for the welfare and the proper

utilization of the elderly population, improving and generating public awareness and support for necessary policy up-gradation and implementation.

Very few studies on population ageing in West Bengal have been done so far. In the present research work, we have studied the trend and magnitude of population ageing (per cent of elderly persons to total population) and related information like sex ratio, age-sex composition of population (Population Pyramid), decadal growth of elderly, households by elderly members and elderly head, life expectancy at birth and at age 60 years, age-specific death rate of elderly, old-age dependency ratio, elderly by state of economic independence, proportion of working elderly persons, literacy rate among elderly persons, proportion of disabled elderly persons, marital status of elderly persons, living arrangement of elderly persons etc in India and West Bengal. The study is based on both secondary and primary data and comparing population ageing relating to general population, different weaker/backward social groups like Scheduled Castes (SC), Scheduled Tribes (ST) and two major religious groups. The study employed some statistical tools like correlations/ regressions, Chi-square tests for homogeneity and independence and econometric models like binary logic regression, factor analysis and reliability analysis.

The review of literature (in Chapter 2) on the study has been done thematically and starts with noting global perspective of population ageing. The First World Assembly on Ageing sponsored by the UNO held in Vienna in 1982 realised population ageing as a global problem. The Government of India in Vienna expressed the view that in India, the elders are well integrated with the society and the welfare of them was linked with the main stream of social and economic development of the country. The United Nations International Year of the Older Persons in 1999 emphasized for the marginalization of the elderly in the development process and for the need to develop 'a society for all ages'. There are various theories, approaches, interpretation and aspects of the process of population ageing. Different indicators for measuring population ageing are presented. Well-being and quality of life are subjective matters mostly depend upon personal perceptions and adjustment in stages of life. Elderly have significantly poor subjective well-being than middle aged persons. Most rural elderly exhibit negative self-perception. The economic aspect of an economy affected by population ageing has two sides (a) increase in the number of the elderly and decline in rate of population growth resulting reduced growth rate in both aggregate demand and investment meaning lower capital

formation (macroeconomic phenomenon) and (b) the impact of ageing upon autonomous individuals in the form of economic behavior over lifecycle (microeconomic phenomenon). Our research study is on population ageing in West Bengal. Some reviews of directly related studies and spatially and contextually relevant empirical studies have been presented here.

Chapter 3 presents “Population ageing in India and West Bengal”. Presentations and analyses of this chapter are based on secondary data. Majority of Indians were of two major religions – Hinduism and Islam consisting of 79.8 and 14.2 per cent of population respectively. Proportion of SC and ST populations were 16.6 and 8.6 per cent respectively. 68.86 per cent of total populations lived in rural areas. Per cent of elderly varies widely from state to state, religion to religion, community to community etc. According to Census of India, 2011, the states like Kerala, Dadra and Nagar Haveli were with highest (12.55) and lowest (4.04) per cent of elderly respectively. Per cent of elderly of states/union territories having low population size were low. Percentages of children and teenagers in India and all states/union territories were highest in Muslim populations among those in all classifications by locality of residence, religion, caste, sex and are approximately 50 per cent and more; per cent of elderly to total population and sex ratio for elderly persons were generally least among Muslims followed by ST. There were marked differences in life spans in populations of different religions and caste groups.

Age-sex distributions of total population in India are provided through the population pyramids. The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an increase in the proportion of elderly population. Shapes of population pyramids in case of Hindu and Muslim populations are shrunken base and broad base respectively which indicates that the rate of ageing in Hindu population is more than that in Muslim.

In India, per cent of persons aged 0–14 years has been decreasing and that aged 60+ years has been increasing, but that aged 15–59 years has been fluctuating resulting in reduction of labour force. In West Bengal, rate of reduction of persons aged 0–14 years was higher than that in India. Per cent of persons aged 15–59 years in West Bengal was higher than that in India implying that position of workforce in West Bengal was better than that in India. Rate of growth of elderly in West Bengal over 2001–2011 was higher than that in India. According to Census of India, 2011, percentages of elderly of India and West Bengal were 8.6 and 8.5 respectively.

According to Census of India, 2011, sex ratios for elderly persons living in rural areas were in general higher than those for elderly persons living in urban areas. Generally sex ratios of elderly were higher than those of general population with some exceptions like in Darjeeling district. Most of the states/union territories in India had already achieved targeted replacement fertility rate of 2.1, even for some of them it became less than 2.1. This fact is one of the major determinants for increasing population ageing in India. Both total fertility rate and crude death rate of West Bengal are lesser than those of India. Three districts of West Bengal, namely, Murshidabad, Malda and Dinajpur (N) were having top most Muslim-majority population with 66.3, 51.3 and 49.9 per cent respectively of total population; respective per cent of elderly were 7.0, 6.4 and 6.3. Per cent of elderly of Kolkata was 11.8. Strongly significant correlations between (a) per cent of elderly and per cent decadal growth rate of elderly in general population (negative) and (b) per cent of elderly and Human Development Index (positive) have been observed and two regression equations of (a) per cent of elderly on per cent decadal growth rate of elderly in general population and (b) per cent of elderly on human development index have been developed.

Oldest-old group (aged 80+ years) grew faster than the other elderly age groups, particularly among females both in rural and urban areas of India and West Bengal and having higher sex ratio than other elderly age groups.

According to Census of India, 2011, in West Bengal, per cent of households not having any elderly members in rural areas was higher than that in urban area, but the reverse was in case of national level. Reasons behind the majority of households not having any elderly members are (a) in some households, no family members were aged 60 or 60+ years, (b) present trend of households being nuclear family, (c) elderly members like to reside separately from their sons, daughters to stay with dignity and independently, to avoid accommodation problem and/or adjustment problems with other family members and (d) economic conditions of elderly have been improving over times etc.

Life expectancy is one of major indicators for increasing population ageing. Life expectancy in India has increased in rural and urban areas. Kerala has got the highest life expectancy at birth followed by Maharashtra and Punjab. Life expectancies at birth and at the age 60 years were higher among females than males in India and West Bengal. Age-specific death rates were higher among elderly males than elderly females. Again, age-

specific death rates were lower among elderly of urban areas than those of rural areas because elderly of urban areas are generally more educated, wealthy and active in workforce and other activities than elderly of rural areas.

Some of the economic indicators for the elderly are old-age dependency ratio, headship of household, state of economic independence, economically dependence, economically independence by number of dependents, working status etc. The old-age dependency ratio has an increasing trend. The gap between female and male old-age dependency ratio also has an increasing trend. There has been considerable gap in all the period of that ratio for rural and urban areas, because of a relatively higher concentration of working age population in urban areas. Since elderly females are expected to live more years than elderly males, per cent of elderly female heads is almost twice of that of elderly male heads. NSSO in 2004 mentioned that 65 per cent of the elderly in India had to depend on others for their day-to-day maintenance. The elderly males were much better off as majority of them did not depend on others for their livelihood. According to NSSO, 60th Round, (January – June 2004), per cent of elderly not dependent on others were (a) higher in urban areas than that in rural areas and (b) remarkably higher among elderly males than that of elderly females, reasons behind the statement are elderly of urban areas and/or elderly males are more likely to remain in workforce and/or are economically well-being than others. About 70–85 per cent of dependent elderly were supported by their own children; 2–3 per cent by grandchildren; about 6 per cent by others. In case of supporting by spouse, 16–19 per cent elderly females were supported by their male spouse, whereas 6–7 per cent of elderly males are supported by their female spouse. Of the economically independent elderly men, more than 90 per cent reported to be living with one or more dependents, while among economically independent elderly women, about 65 per cent were having one or more dependents. Elderly females were having lesser number of dependents than elderly males in both rural and urban areas.

As per Census of India, 2011, 66.4 per cent of elderly males, 28.4 per cent of elderly females in rural area engaged in economic activity. In urban areas it was only 46.1 per cent of elderly males and 11.3 per cent of elderly females engaged in economic activity. The proportions increased in 2011 for both elderly males and women as compared to Census of India, 2001 in both rural and urban areas. But the proportions increased from census 2001 to 2011 in case of elderly women were relatively higher than the proportions increased from census 2001 to 2011 in case of elderly males because of

increase in females' intention to involve in workforce and be self-dependent. A remarkable proportion of elderly at the age 60 years, even at the age 80 years remained in working condition. The increase of elderly remained in working condition is one of the determinants for increasing population ageing in India and West Bengal.

Literacy levels among elderly of (a) rural and urban areas, (b) males and females have improved tremendously over 2001 to 2011. There were huge gaps of literacy rates of elderly between (a) rural and urban areas and (b) males and females. Literacy rates for elderly in West Bengal were better than those in India. The increase of literacy among elderly is another determinant for increasing population ageing in India and West Bengal. Despite illness higher proportion of elderly men seemed to be feeling better health condition than elderly women. More elderly men and women in urban areas felt to have good/fair health as compared to elderly in rural areas. In both rural and urban areas, elderly men were more mobile than elderly women. About 90 per cent of elderly were still mobile, it is a good indicator for the well-being of the elderly. Prevalence of disabilities was higher in rural areas than that in urban areas. Census of India, 2011 pointed out that locomotion and visual disability were the most prevalent disabilities among elderly in rural and urban areas of India and West Bengal. Census of India, 2011 pointed out that per cent of currently married elderly women was lower than the per cent of currently married elderly men. Living arrangement of elderly is very important indicator of social status and well-being. More than 56 per cent of elderly lived with their spouse and 32 per cent of elderly live with their children. About 5 per cent of elderly lived alone and 4 per cent live with other relations and non-relations.

An overview of global population ageing has been presented in this chapter.

Chapter 4 presents "Nature and pattern of population ageing among Muslims and non-Muslims population in India, West Bengal and Malda district". Presentations and analyses are based on both secondary data: census data over 2001–2011 and primary data from Malda district, a Muslim dominated district of West Bengal. Studying the problems relating to religion is very important considering a pledge to build an inclusive, plural and secular society in India. India's Muslims have the lowest living standard in the country on a per capita. According to Census of India, 2011, literacy rate (%) and work participation rate (%) in general population of India were lowest among Muslim population. These are major determinants for the lowest per cent of elderly among Muslim population.

For collecting primary data from Malda district, one town was selected at random and from that selected town, one ward was selected at random. Again, for collecting primary data from rural areas of Malda district, one block from blocks having more than 50 per cent of Muslims and one block from blocks having less than 50 per cent of Muslims were selected at random. From each selected blocks, 2 villages were selected at random. In the next and final stage, from each of selected ward, villages; 25 households having at least one elderly were selected at random.

Shapes of population pyramids in case of Hindu and Muslim populations are shrunken base and broad base respectively indicates that the rate of ageing in Hindu population is higher than Muslim. In India, West Bengal and Malda district, comparing Hindu and Muslim populations, (a) per cent of persons in the age group 0-14 years was higher among Muslims than Hindus indicating higher birth rates among Muslims than Hindus, (b) per cent of persons in the age group 15-59 years (working age group) was lower among Muslims than Hindus indicating lesser work participation among Muslims than Hindus and (c) per cent of persons in the age group 60+ yearly (per cent of elderly) was lower among Muslims than Hindus. These variations between Hindus and Muslims are very prominent in Malda district. Per cent of elderly is higher among Hindus than Muslims in all elderly age groups, particularly in Malda district. This variation between Hindus and Muslims is very prominent in oldest-old age group (80+ years). In India, West Bengal and Malda district, per cent of elderly female was higher than that of male. In India, West Bengal and Malda district (a) sex ratios of elderly and general population of Hindu Community were higher than those of Muslim community and (b) in both Hindu and Muslim communities, (1) sex ratio of elderly was higher than that of general population, (2) sex ratio of general population was less than 1000, (3) sex ratio of elderly mostly is greater than 1000 indicating elderly females live longer than elderly males.

More than 70 per cent households in Malda district did not have any elderly member in the household. According to Census of India, 2011, in both rural and urban areas, per cent of households without any elderly family member in Malda district was higher than those of India and West Bengal, that is because Malda district is Muslim dominated one and its per cent of elderly is lesser than those of India and West Bengal. Since elderly females are expected to live more years than elderly males, per cent of elderly female heads was almost twice of that of elderly male heads. Nearly 20 per cent of households in Malda district were having elderly heads. According to Census of India,

2011, per cent of households having elderly head in Malda district was less than those in India and West Bengal.

Work participation among Muslim elderly females was very low compared that among Hindu elderly females in India, West Bengal and Malda district. Per cent of currently married elderly males was more than twice that of currently married elderly females. Again per cent of currently married elderly males in Malda district was more than those in India and West Bengal, but per cent of currently married elderly females in Malda district was lesser than those in India. Disabilities due to vision and movement were more serious problems for the elderly in both rural and urban areas of Malda district. These disabilities were more acute in Malda district than West Bengal as a whole. There were improvements of literacy among elderly over 2001-2011 among Hindu and Muslim communities in India and West Bengal. Among elderly of Hindu community, literacy level among elderly in West Bengal was much higher than that in India as a whole. But literacy level of elderly belonging to Muslim community in West Bengal was lesser than that in India as a whole. There were significant gaps in the literacy level of elderly in Malda district between (a) rural and urban areas and (b) males and females.

Summary of findings based on primary data from Malda district are as follows. Living arrangements of majority of elderly males were with spouses, sons, daughters and/or others which were very high compared to those for elderly females in all the locality of residences. Reasons behind those facts were elderly females were living more years than elderly males and were becoming widows.

Per cent of dependent elderly in the households were more in rural (more Muslim) area than that in rural (less Muslim) area. Per cent of working elderly in urban area was less than in both the rural areas. Elderly persons of rural (more Muslim) area were more dependent; having less dependants; less being head of household; less involved in day-to-day purchases and other activities, big purchases; decision-making of family; having more immovable property, liquid asset; less presently working and/or pension holders than those of elderly person of rural (less Muslim) area. Financial contributions of the elderly persons to their respective households were negligible. Female elderly were mostly to get outside financial supports than male elderly in all localities of residence.

Per cent of elderly capable of spending money for buying in urban, rural (less Muslim) and rural (more Muslim) areas were 38.7, 30.2 and 18.6 respectively. Per cent of

elderly getting sufficient food and clothes in urban, rural (less Muslim) and rural (more Muslim) areas were 90.3, 69.8 and 64.4 respectively. Per cent of elderly getting sufficient medicines and health care in urban, rural (less Muslim) and rural (more Muslim) areas were 64.5, 61.9 and 42.4 respectively. Therefore elderly in rural (more Muslim) area are in the worst conditions among others in respects of capable of spending money for buying, getting sufficient food and clothes and getting sufficient medicines and health care. Reason behind the same is that the economic condition of Muslims are worst compared to others. The order (in descending) of getting necessities of life by elderly are getting sufficient food and clothes, getting sufficient medicines and health care and capable of spending money for buying. Generally the chance of having money by people (particularly females) decreases at their elderly age.

The determinants of social, economic and health conditions of people are age, sex, marital status, locality of residence, working status and possessing movable and immovable assets. Generally females (particularly elderly females) are less favourably treated than males in the society. Per cent of elderly felt depressed in urban, rural (less Muslim) and rural (more Muslim) areas were 41.9, 57.1 and 49.2 respectively. Per cent of elderly mobile in urban, rural (less Muslim) and rural (more Muslim) areas were 90.3, 84.1 and 83.1 respectively. Per cent of elderly hospitalized in urban, rural (less Muslim) and rural (more Muslim) areas were 16.1, 17.5 and 6.8 respectively. Elderly females were more depressed than others. Very least percent of elderly were confined to bed. Elderly females of urban areas were more associated with (a) different activities including cultural of their localities, (b) any religious organizations/associations than elderly males, but the reverse was in case of association with any political activities. Per cent of elderly associated with cultural activities in urban, rural (less Muslim) and rural (more Muslim) areas were 22.6, 12.7 and 10.2 respectively. Per cent of elderly associated with religious organizations/associations in urban, rural (less Muslim) and rural (more Muslim) areas were 48.4, 33.3 and 45.8 respectively. Per cent of elderly associated with political activities in urban, rural (less Muslim) and rural (more Muslim) areas were 29.0, 11.1 and 13.6 respectively. Elderly females (particularly elderly females in rural (more Muslim)) area were less associated in political activities than elderly males. Elderly females (particularly elderly females in rural (more Muslim)) were less associated in cultural activities, religious organizations/associations than elderly males except elderly females in urban areas.

Attempts have been made to formulate some binary logistic regression equations of vital attributes for securities of elderly (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed of the elderly persons on the basis of the survey data on the elderly persons of the sampled households of Malda district. Factor analysis coupled with Reliability analysis has been done to assess life satisfaction of the elderly persons of Malda district with help of surveyed data.

Chapter 5 presents “Nature and pattern of population ageing among scheduled tribes (ST) and non-Scheduled Tribes population in India, West Bengal and Jalpaiguri district”. Presentations and analyses are based on both secondary data: census data over 2001–2011 and primary data from Jalpaiguri district, a district of West Bengal having highest ST population in West Bengal. Indian tribals are a heterogeneous group; most of them stay at the lowest stratum of the society due to various factors like geographical and cultural isolation, low level literacy, primitive and seasonal occupations and extreme level of poverty. They are ignorant, gullible and unaware of the day-to-day happenings not being assertive to grasp the opportunities that are offered by the Government; avoid assimilation and joining the mainstream of society. They are not capable of providing education to their children and are not able to avail modern medical and health care facilities. According to Census of India, 2011 in West Bengal, per cent of ST to total population in Jalpaiguri district is 18.9 followed by Puruliya district with 18.5 per cent ST population to total population; districts Kolkata, Haora, Midnapore (E) and Coochbehar are four districts with low per cent of ST population having 0.2, 0.3, 0.5 and 0.6 per cent ST population of their total populations respectively. According to Census of India, 2011, per cent literacy rate and per cent work participation of ST population of all ages in India were 49.5 and 45.4 respectively.

For collecting primary data from Jalpaiguri district, one town was selected at random and from that selected town, one ward was selected at random. Again, for collecting primary data from rural areas of Jalpaiguri district, one block from blocks having at least than 40 per cent of ST and one block from blocks having at most 10 per cent of ST were selected at random. From each selected blocks, 2 villages were selected at random. In the next and final stage, from each of selected ward, villages; 25 households having at least one elderly were selected at random.

The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an increase in the proportion of elderly population. Shapes of population pyramids in case of non-ST and ST populations are shrunken base and broad base respectively indicates that the rate of ageing in Non-ST population is higher than that in ST. In India, West Bengal and Jalpaiguri district; (a) per cent distribution of elderly was not homogeneous among ST and non-ST populations, per cent of elderly in non-ST population was higher than that in ST population, (b) per cent of elderly female was higher than that of male except in ST population in Jalpaiguri district. Per cent of elderly of oldest-old age group among non-ST population of India and West Bengal and Jalpaiguri district were around 1.0, but those among ST population were around 0.5. In India and West Bengal (a) sex ratios of elderly and general population of ST population were higher than those of non-ST community and (b) in both ST and non-ST populations, (1) sex ratio of elderly was higher than that of general population, (2) sex ratio of general population was less than 1000 and (3) sex ratio of elderly mostly was greater than 1000. In case of Jalpaiguri district, most of sex ratios for elderly and general population were lesser than 1000 and sex ratio of elderly population of ST population were lesser than those for non-ST population. It may be inferred that proportion of females of females in all ages and elderly age-groups among ST population were higher than those among non-ST population, with exceptions that reverse situation hold for elderly age groups among ST population in Jalpaiguri. Occurrence of population ageing in Jalpaiguri district was lesser than that in India and West Bengal, but higher than that in Malda district. Since elderly females were expected to live more years than elderly males, percentages of elderly female heads were almost twice of that of elderly male heads in both rural and urban areas of India, West Bengal, Jalpaiguri district respectively. In case of ST population, per cent of elderly working was least in Jalpaiguri district compared to India and West Bengal; but in case of non-ST population, per cent of elderly working was least in West Bengal compared to India and Jalpaiguri district. Percentages of elderly working among non-ST population were lesser than those among ST population, but the reverse were in case of Jalpaiguri district.

In case of ST population, per cent of currently married elderly was least in Jalpaiguri district; but in case of Non-ST population, per cent of currently married elderly was homogeneous in India, West Bengal and Jalpaiguri district. In both ST and Non-ST populations, per cent of currently married elderly male was almost twice that of currently

married elderly females. Percentages of currently married elderly among non-ST population were higher than those among ST population in India, West Bengal and Jalpaiguri district. Percentages of currently married elderly among both ST and non-ST populations of Jalpaiguri were lesser than those in India, West Bengal and Malda district.

Disabilities were highest in case of ST population of Jalpaiguri district among all other populations in India, West Bengal and Jalpaiguri district. In India, West Bengal and Jalpaiguri district, number of disabilities among ST populations were higher than those among non-ST populations because compared to elderly among ST population, elderly among non-ST population lead more control and better lives.

Among elderly of non-ST population in 2011, literacy level among elderly in West Bengal was much higher than that in India and Jalpaiguri district. But literacy level of elderly belonging to ST population in 2011 in India, West Bengal and Jalpaiguri district were almost equal, but there were remarkable variations of literacy level of elderly belonging to non-ST population in 2011 in India, West Bengal and Jalpaiguri district.

Summary of findings based on primary data from Jalpaiguri district are as follows. In urban, rural (less ST) and rural (more ST) of Jalpaiguri district, per cent of living arrangement of elderly females without spouse, but with sons, daughters and others were higher than those of elderly males. Reasons behind those facts were elderly females were living more years than elderly males and were becoming widows. Per cent of dependent elderly in the households were more in rural (more ST) area than that in urban and rural (less ST) areas. Therefore, economic condition of elderly in rural (more ST) was very low compared to elderly in urban and rural (less ST) areas. Per cent of working elderly in urban area was less than in both the rural areas. Per cent of elderly females being dependent on others was more than elderly males in urban and rural (less ST) areas, but in this context, percentages of elderly females and males in rural (more ST) were almost equal. Percentages of elderly females having dependents in all the localities of residence were negligible. Percentages of elderly females being head of household in all the localities of residence were lesser than those of elderly males.

Per cent of elderly females being involved in day-to-day purchases was lesser than elderly males in urban and rural (less ST) areas, but in this context, percentages of elderly females and males in rural (more ST) were almost equal. Elderly person of rural (more

ST) areas were more dependent; having less dependants; more being head of household; more involved in day-to-day purchases and other activities, big purchases; having less immovable property, liquid asset; and less presently working and/or pension holders than those of elderly person of rural (less ST) areas. In Jalpaiguri district, contributions of the elderly persons to their respective households were negligible in all the localities of residence. Per cent of elderly in rural (more ST) area was very high compared to those in urban and rural (less ST) areas because of miserable economic condition of ST population. Per cent of elderly females to get outside financial supports was higher than that of elderly males in all localities of residence. About 80 per cent of elderly in Jalpaiguri district were mobile. Per cent of elderly associated with cultural, religious and political activities were least among elderly in rural (more ST) area of Jalpaiguri district.

Like the study in Malda district, attempts have been made to formulate some binary logistic regression equations of vital attributes for securities of elderly (a) health status; (b) being head of household; (c) involvement in day-to-day purchase of the household, big purchase like land, house, car etc of the household, decision-making of the family and (d) feeling depressed of the elderly persons on the basis of the survey data on the elderly persons of the sampled households of Jalpaiguri district. Factor analysis coupled with Reliability analysis has been done to assess life satisfaction of the elderly persons of Jalpaiguri district with help of surveyed data.

In chapter 6, we have assessed and compared the situations of population ageing and social security of the elderly among SC population in India and West Bengal based on secondary data relating to population from Censuses of India, 2001 and 2011 and SRS Baseline Survey, 2014.

Remarkable shrinkages of pyramids on SC population over years 2001–2011 indicates a decline in fertility leading to an increase in the proportion of elderly population. Proportion of population aged 0–14 years decreased over year 2001–2011, but there are increasing trends in population for other age-groups. Sex ratios of elderly among SC population in West Bengal were generally higher than those in India meaning that more elderly females are living in West Bengal than India. Per cent of working elderly among SC population is lesser than that among ST population in India and West Bengal. Per cent of working elderly among SC population in West Bengal was very low compared to that in India. Per cent of working female elderly among SC population was 7.7 whereas that figure in Indian context was 28.5. Among elderly belonging to SC

population, about 60, 80 and 40 per cent person, male and females respectively are currently married in India and West Bengal and that figure was higher than elderly among ST population in India and West Bengal. Regarding disabilities of elderly among SC population both in India and West Bengal, vision and movement disabilities were major problems for them. Prevalence of disabilities of elderly among SC population was almost similar to elderly among ST population both in India and West Bengal. Literacy rate of elderly among SC population in West Bengal was better than that in India. Literacy rate among elderly females of SC population was very low compared to that of elderly males which is common in all cases. There is a tremendous improvement of literacy rate among elderly of SC population in India and West Bengal since all sections of population are becoming well aware about the importance of education. For India and West Bengal, literacy rate of elderly among SC population was better than that of elderly among ST population. It may be inferred that in both India and West Bengal, elderly among SC population were in a better position compared to ST population.

In Chapter 7 we have presented Constitutional provisions and legal protection, Government programmes and policies for the welfare of elderly in India and West Bengal. Three key human rights principles are fundamental to guaranteeing the right of social security: (a) comprehensiveness (social security covers all the risks involved in the loss of means of subsistence for reasons beyond person's control), (b) flexibility (the retirement age should be flexible depending on the occupations performed and the working ability of the elderly, with due regard to demographic, economic and social factors) and (c) non-discrimination (social security must be provided without discrimination based on health status, race, ethnicity, age, sex, disability, language, religion, national origin, income or social status).

The Ministry of Social Justice and Empowerment is the nodal Ministry for the welfare of elderly. The Ageing Division in the Social Defence Bureau of the Department of Social Justice and Empowerment develops and implements policies and programmes for the elderly in close collaboration with state governments, NGOs and civil society. Some of the national policies for elderly are (a) National Policy on Older Persons, (b) Old Age Social and Income Security, (c) National Old Age Pension Scheme, (d) National Family Benefit Scheme etc. Some of the privileges and benefits provided to the elderly are (a) bank loans for pensioners and family pensioners, (b) income tax rebate, (c) deduction in respect to medical insurance premium, medical treatment, (d) concessions on

travelling by road, train and air etc and (e) Pension and Family Pension with Dearness Relief, Gratuity, Leave Encashment along with enhanced Pension after attaining certain ages (in case of central/state government permanent employees) etc. The chapter also discussed pension system in India, professional services to elderly.

Some of the highlighted additional policies and programmes for welfare of elderly in West Bengal are (a) housing schemes for BPL category – Gitanjali and Amar Thikana, (b) Project Pranam, a 24-hour helpline to provide safety, security and medical assistances to senior citizens living alone, (c) provision for pensions for the needy and elderly folk artistes through a project Lokprasara Prakalpo, (d) e-pension to provide e-governance to the pensioners of recognized non-Government aided educational institutions, Panchayat, Municipality etc, (e) career mela for senior citizens in Kolkata etc. This chapter has also highlighted, in brief, the job opportunities for services related to elderly in homes, in old age homes, hospitals etc. It has also mentioned different professional courses relating to the services of the elderly persons.

A large section of elderly suffering cruelty at the hands of friends or strangers do not get any reprieve. But even today, say lawyers, awareness about the law and its provisions remain abysmally low; because of this, elderly continue to suffer mental and physical abuse from their children or kin. There are several examples of incidence of murder and harassment etc of elderly in India. Therefore, it is said that India is not a country friendly for the elderly persons.

Are elderly persons in India an asset or a liability? If the answer to this question is the latter, there is a justification for the mounting concern regarding their problems as the percentage of elderly is on a rise. If the answer is the former, this asset needs to be utilized in a proper manner for an optimum benefit. Rise of elderly in India should be handled at its infancy so that in the coming years the nation will not end up in groping in the dark.

8.2 Conclusions

On the basis of the above findings, the following conclusions emerge from the study.

- (10) The rate of increase of population ageing in case of Muslims is lesser than that of Hindus. The rate of ageing in Non-ST population is higher than that in ST. The rate of increase of ageing in case of Indian SC population is lesser than SC population of West Bengal.

- (11) Literacy rate and life expectancy of elderly have been improved remarkably in India and West Bengal.
- (12) Per cent of elderly in total population varies widely among communities, religions, localities, sex etc. The link between ageing and development is wide ranging. Ageing is a 'triumph of civilization' and it is an important determinant of economic development. Information on how castes, religion and other factors affect the wellbeing of elderly in India is very limited. Population ageing is less advanced among SC, ST and Muslims than that the population as a whole.
- (13) Sex ratios of elderly are generally higher than those of all ages except in cases of ST of Jalpaiguri district and Muslims of Malda district. Sex ratios of elderly are generally low and lesser than 1000 in cases of Muslims and ST populations.
- (14) Percentages of households with at least one elderly member in the households in urban areas are higher than those in rural areas of West Bengal, Malda and Jalpaiguri districts.
- (15) Malda (a Muslim dominated district), Jalpaiguri (a district having highest per cent of ST population) of West Bengal are having remarkably low per cent of households with elderly head. Percentages of households with elderly head in urban areas are higher than those in rural areas of West Bengal, Malda and Jalpaiguri districts.
- (16) Remarkable per cent of elderly, particularly elderly males are in working conditions. Percentages of working elderly males and females in rural areas are greater than those in urban areas. Percentages of working elderly males are remarkably greater than those of working elderly females. Per cent of working elderly belonging to Hindu community is higher than that belonging to Muslim community in India, but the reverse is in West Bengal. Percentages of working elderly belonging to ST communities are higher than that belonging to non-ST community in India and West Bengal, but the reverse is in Jalpaiguri. Per cent of working elderly in India is higher than that in West Bengal among SC community.
- (17) 74 per cent of elderly males and about 41 per cent of elderly females are receiving some personal income, 43 per cent of all elderly receiving no income.
- (18) Regarding literacy level of the elderly in India and West Bengal, there are huge gaps in literacy rates between (a) rural and urban, (b) male and female, (c)

Hindu and Muslim, (d) ST and Non-ST and (e) India and West Bengal. Literacy rates have been improved over 2001 – 2011 in all cases.

- (19) Number of disabled elderly among ST community, particularly ST community of Jalpaiguri district are very high. Number of disabled elderly in rural areas are greater than those in urban areas. Similarly numbers of disabled elderly among ST community are greater than those of non-ST communities. Major disabilities are vision, movement and hearing.
- (20) Life expectancies at birth in West Bengal are higher than those in India for both males and females and these are 70 years in 2011-2015.
- (21) Age-specific death rate among elderly of West Bengal is less than that in India.
- (22) Old-age dependency ratio of West Bengal is less than that in India, except urban area. More than 50 per cent of elderly males in India and West Bengal are not dependent on others, but more than 70 per cent of elderly females in India and West Bengal are dependent on others. Old-age dependency ratio has been increasing.
- (23) Despite illness, more elderly males seemed to be feeling better health condition than elderly females. More elderly in urban areas felt to have good/fair health as compared to the elderly in rural areas. In both rural and urban areas, elderly males are more mobile than elderly females.
- (24) More than 56 per cent of elderly live with their spouse and 32 per cent with their children; about 5 per cent live alone and 4 per cent with other relations and non-relations.
- (25) At present age, elderly persons are living better than those of yesterdays socially, economically, physically.

8.3 Suggestions

The following suggestions may be made in the light of the above findings and conclusions.

- (10) As the proportion of elderly to the total population increases, capable and willing elderly must be provided the opportunities to be engaged in work and to earn and contribute to their families through their productive activities by (a) extending retirement age, (b) providing contractual/ casual works etc. In case, employer and nation will be beneficial by utilizing experienced and knowledgeable manpower and enlarging manpower.

- (11) The participation of professional and the educated elderly in economic activities after retirement should be enhanced. In particular, the private sector may be geared to use this pool through selective mechanism. It may help them to minimize their labour cost and achieve greater competitiveness.
- (12) Capable and willing elderly may be provided opportunities to run self-entrepreneurships through micro-financing.
- (13) Elderly, who are not engaged through productive activities outside or inside home, may try to be engaged by other activities by associated with (a) local elderly members, (b) religious activities, (c) social organizations etc.
- (14) Family members may be encouraged to co-reside with their elderly members by proper adjustment peacefully. Co-residence of elderly in the household may reduce the chance of illness, morbidity, unhappiness of the elderly; as a whole it would increase the chance of well-being of the elderly.
- (15) Regular low cost or free health checkup for the elderly should be arranged by setting health services nearer to the elderly premises. Mobile dispensaries may be introduced. The local level health workers should be engaged for the health need of the elderly. Medicines at subsidized rate may be provided to the poor elderly.
- (16) Artificial limbs viz. leg and spectacles may be provided to the needy poor elderly free of cost or at a low cost.
- (17) Some elderly are becoming psychological disordered; regular free or low cost counseling may be arranged for them and to their family members to deal with elderly with care. Again, health of elderly may be improved by promoting healthy life style, subsidizing assistive technology and creating geriatric medical infrastructure in a big way.
- (18) People of all ages in India are generally bear with own out-of-pocket medical and health care expenditures. Again these costs increase as age increases, so the elderly has to bear huge medical and health care costs from their own out-of-pocket. Government is not in a position to take such responsibility at its own shoulder. Government may take initiatives with corporate to provide medical and health care arrangements to the elderly under public private partnerships (PPPs) and if possible, the same may be extended to the general people.
- (19) Elderly desire social security through independent living as in many cases children find it difficult to support their ageing parents. There is an acute need for building old age homes in view of continued increased in their numbers. Apart from government initiatives, NGOs and corporate may extend helping hands by setting up old age homes under their public private partnerships and corporate social responsibility (CSR) initiatives.
- (20) Given that expenses incurred for providing old age support have linkages with positive externalities as often these play important role in survival of the family,

the amount of relief under different social security schemes for the elderly in poor households should be enhanced.

- (21) Elderly persons are generally soft targets for criminal elements. They become victims of fraudulent dealings and of physical and emotional abuse within the household by family members to force them to part with their ownership rights. Widow's rights of inheritance, occupancy and disposal are at times violated by their own children and relatives. It is important to ensure that protection be available to elderly persons.
- (22) Media have a very important role to play in highlighting the changing situation of elderly and in identifying emerging issues and areas of action.
- (23) Promotion of policies and programmes should be addressed giving higher priority (a) elderly women, (b) elderly ST and SC persons, (c) elderly of rural areas.
- (24) There are several socio-economic gaps between Muslim elderly and non-Muslim elderly. As change agents for reducing these gaps, that is, by improving socio-economic status of Muslim elderly, individuals and organizations need to come out with programmes and new initiatives that will cater to the development of Muslim community to mobilize and build awareness on their rights, welfare programmes and schemes. Some suggestions are applicable in case of ST and SC elderly.

8.4 Scope for Future Research

Public policy on population ageing in countries, particularly developing countries, has tended to emphasise the welfare requirements of the elderly. The wider dimensions of livelihood of elderly are generally not covered. The available knowledge about the ways to integrate elderly people to the economy and development process is very limited.

There are great scopes for research on the economic and social valuation, employment opportunities of elderly. Research of disease profile of elderly may be thoroughly made.

Research regarding modes and directions of intergenerational transfers of economy within the households assume importance for devising policies encouraging co-residential living arrangements of elderly with other family members. The role of economic variables in this respect is an important area for further study.

Wide range knowledge bases (databases) on elderly are not available, further research may be done to develop knowledge base for elderly covering wide aspects of elderly.

Very few studies have done on old age homes, further research may be done in this area covering elderly in paid and non-paid old age homes. Research may be done how public private partnership model may be employed in old age homes.

Comparative study of population ageing and social security for the elderly of (a) the neighboring countries of India and (b) developed and developing countries of the world may be considered.

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Appendices

Appendix-A
Published papers

Appendix – A.1

Trends and Pattern of Population Ageing in India and West Bengal:
A Comparative Study

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Trends and Pattern of Population Ageing in India and West Bengal: A Comparative Study

Archita Nayak and K. K. Bagchi***

ABSTRACT

Population ageing is a global issue which has multi-dimensional impacts on all economic issues of a nation. It is related to many demographic and vital statistics, economic status, health and social status of population. There is a huge variation of population ageing in India varying over state to state, religion to religion, community to community, locality of residences and sex etc. Remarkable shrinkages of population pyramids on population for India and West Bengal over 2001–2011 indicates a decline in fertility leading to an increase in the proportion of elderly population. Attempts have been made to assess ageing and its related aspects in India and West Bengal. Correlation and regression analysis have been employed to study impacts of % decadal growth rate of elderly in general population and human development index. The present study stands for a strong evidence for the Preston's hypothesis that individuals born in richer countries, on an average, can expect to live longer than those born in poor countries.

Keywords: *Per cent of elderly; Life expectancy; Population Pyramid; Old-age dependency; Economic independence; Economically dependence.*

1.0 Introduction

India is a vast country with tremendous diversities in respect of language, religion, culture, food habits, dresses, caste and creeds etc. According to Census of India, 2011, there were 35 states/union territories in India. Majority of Indians are of two major religions – Hinduism and Islam consisting of 79.8 and 14.2 per cent of population respectively.

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Some other religions are Christianity, Sikhism, Buddhism and Jainism consisting of 2.3, 1.7, 0.7 and 0.4 per cent of population respectively and others; 68.86 per cent of total populations live in rural areas; proportion of Scheduled Caste and Scheduled Tribe populations are 16.6 and 8.6 per cent respectively. West Bengal is one of the states of India having 70.5 per cent Hindus, 27.0 per cent Muslims population; 68.13 per cent population live in rural areas; proportion of Scheduled Caste and Scheduled Tribe populations are 23.5 and 5.8 per cent respectively. Per cent of total Population in India, West Bengal and its Districts according to Census of India, 2011 is provided in Table 1.

Table 1: Percent of Total Population in West Bengal and its Districts

	% of Total Population					
	Hindu	Muslim	Rural	Urban	SC	ST
India	79.8	14.2	68.9	31.1	16.6	8.6
West Bengal	70.5	27.0	68.1	31.9	23.5	5.8
Darjeeling	74.0	5.7	60.6	39.4	17.2	2.1
Jalpaiguri	81.5	11.5	72.6	27.4	37.7	18.9
CoochBehar	74.1	25.5	89.7	10.3	50.2	0.6
Dinajpur (N)	49.3	49.9	88.0	12.0	26.9	5.4
Dinajpur (S)	73.6	24.6	85.9	14.1	28.8	16.4
Malda	48.0	51.3	86.4	13.6	20.9	7.9
Murshidabad	33.2	66.3	80.3	19.7	12.6	1.3
Birbhum	62.3	37.1	87.2	12.8	29.5	6.9
Bardhaman	77.9	20.7	60.1	39.9	27.4	6.3
Nadia	72.2	26.8	72.2	27.8	29.9	2.7
24 Parganas (N)	73.5	25.8	42.7	57.3	21.7	2.6
Hugli	82.9	15.8	61.4	38.6	24.4	4.2
Bankura	84.3	8.1	91.7	8.3	32.7	10.3
Purulliya	81.0	7.8	87.3	12.7	19.4	18.5
Haora	72.9	26.2	36.6	63.4	14.8	0.3
Kolkata	76.5	20.6		100.0	5.4	0.2
24 Parganas (S)	63.2	35.6	74.4	25.6	30.2	1.2
Medinipur (W)	85.5	10.5	87.8	12.2	19.1	14.9
Medinipur (E)	85.2	14.6	88.4	11.6	14.6	0.5

Source: Census of India, 2011

Per cent of elderly varies widely from state to state, religion to religion, community to community. While comparing population ageing according to religions,

two major religions -Hinduism and Muslim will be considered. The states like Kerala, Dadra and Nagar Haveli were with highest (12.55) and lowest (4.04) per cent of elderly respectively. Per cent of elderly of states/union territories having low population size were low. Percentages of children and teenagers in India and all states/union territories were highest in Muslim populations among those in all classifications by locality of residence, religion, caste, sex and are approximately 50 per cent and more; per cent of elderly to total population and sex ratio for elderly persons are generally least among Muslims followed by scheduled tribes. There were marked differences in life spans in populations of different religions and caste groups.

2.0 Data and Methodology

Secondary data relating to population and population from (a) Census of India 1961 – 2011, (b) National Sample Survey Organization (60th Round January – June 2004), (c) Sample Registration System (SRS) Office of the Registrar General and (d) online and government sources. Data have been presented in figures and tables.

3.0 Review of Literature

People's Cultural Centre (PECUC) (2002) provided ageing scenario for India for 1901-2001; those and social security scenario of Orissa for 2001. Dhar Chakraborti (2004) discussed population ageing in the context of Asia. Based on UNO data and Indian census data, indices of demographic and ageing, socio-economic characteristics and workforce participation of elderly, health conditions, national health expenditures and related figures for 1950-2050 for different world regions particularly Asia including India were provided.

Bose and Kapur (2004) presented figures on population ageing and related data of the different states of India consisting (a) growth of 60+ populations, 1951-2016, (b) characteristics of 60+ population, 60+ workers, economic security, living arrangements, disability and chronic illness, 60+ widow and widowers: district wise for states, 1991, (h) micro survey of 60+ persons in a middle class locality in New Delhi, (i) international comparisons: elderly in Canada, (j) global perspectives: UNO projections. Per cent of 60+ population in 1991 in Kerala and West Bengal were 8.8 and 6.1 respectively.

Rajan (2006), based on censuses (1971-2001) and NSSO (52nd round) presented demographic, ageing, socio-economic figures and some projections of India up to 2051. It presented data on health, health services including morbidity for elderly in India.

Devi et al. (2008) pointed that there was an increasing trend in relative change in the economically active elderly in India from 1961-2020. Based on Indian census data, different indices of population ageing state wise were presented. For the elderly in Kerala, based on census, per cent distribution of age and sex composition, work participation, non-workers by activity status, literacy rate, education level, main workers, economic characteristics (based on NSSO, 52nd round), and the number of beneficiaries of various pension schemes were presented. Based on sample survey data on elderly in Kerala, per cent distribution of different characteristics (age, literacy, employment, financial status, health condition, standard of living, involvement in household decision making and work, care giver etc.) of the elderly have been presented. In the study, logistic regression were employed to study influences of determinants (sex wise) of (a) health, (b) involvement in decision making, (c) involvement in household work. The main conclusion of the study is that possessing some asset, especially liquid asset, increases the chances of the elderly being made a part of household creating a feeling of belonging which is of greatest importance of the elderly.

Roy (2013) in his paper aimed to present an emerging scenario of population ageing in West Bengal on the basis of past trends. It was found that the elderly population in West Bengal had been growing in a faster rate than all India average. The current trend of population ageing also revealed the fact that, in future, there would be larger proportion of elderly population in the state, with higher age and majority of them would be women for whom better social security measures would be needed.

Alam et al. (2014) delineated the status of elderly in West Bengal-income and asset holding among elderly, living arrangement and family relations, health status including mental health, morbidity, hospitalization, access to health care and financing, social security in old age etc.

4.0 Trends of Population Ageing in India

Elderly population (aged 60 years and above), % decadal growth rate of elderly in elderly population vis-à-vis that of general population, per cent of elderly and per cent distribution of population by broad age groups in India for the census years 1961 to 2011 are provided in the following tables. Age-sex wise distributions of population in India according to the census 2001 and 2011 are also provided in the form of population pyramid (age-sex pyramid). Elderly population (aged 60 years and above) in India for the census years 1961 – 2011 is provided in Table 2.

Table 2: Elderly Population (Aged 60 years and above) (in Millions) in India

Source	Total			Rural	Urban
	Person	Male	Female		
Census 1961	24.7	12.4	12.4	21.0	3.7
Census 1971	32.7	16.9	15.8	27.3	5.4
Census 1981	43.2	22.0	21.1	34.7	8.5
Census 1991	56.7	29.4	27.3	44.3	12.4
Census 2001	76.6	37.8	38.9	57.4	19.2
Census 2011	103.8	51.1	52.8	73.3	30.6

Source: Census of India

The growth in elderly is due to enhancement of longevity of life because of economic well-being, better medicines and healthcare and reduction in fertility rates.

% Decadal growth rate of elderly in elderly population during the period x – y

$$= \frac{\text{No.of elderly in y} - \text{No.of elderly in x}}{\text{No.of elderly in x}} \times 100$$

% Decadal growth rate of elderly in general population during the period x – y

$$= \frac{\text{No.of elderly in y} - \text{No.of elderly in x}}{\text{Total no.of persons in y} - \text{Total no.of persons in x}} \times 100$$

% Decadal growth rate of elderly in elderly population depends on only growth of elderly over two periods, but % Decadal growth rate of elderly in general population depends on both growths of elderly as well as total number of persons over two periods.

% Decadal growth rates of elderly in elderly and in general population during the periods 1951-61 to 2001-11 in India are provided in Table 3. Table 3 indicates that growth of elderly in population has been happening at a faster rate than growth of total number of persons in population.

Table 3: % Decadal Growth Rate of Elderly Population in India

Period	In elderly population	In general population
1951 - 1961	23.9	21.6
1961 - 1971	33.7	24.8
1971 - 1981	33.0	24.7
1981 - 1991	29.7	23.9
1991 - 2001	25.2	21.5
2001 - 2011	35.5	14.9

Source: Census of India

The percents of elderly to total population according to sex, locality of residence, religion and caste in India for the census years 1961 to 2011 are provided in Table 4. There is an increasing trend in population ageing.

Table 4: Percent of Elderly in India

Source	Person	Male	Female	Rural	Urban
Census 1961	5.6	5.5	5.8	5.8	4.7
Census 1971	6.0	5.9	6.0	6.2	5.0
Census 1981	6.5	6.4	6.6	6.8	5.4
Census 1991	6.8	6.7	6.8	7.1	5.7
Census 2001	7.4	7.1	7.8	7.7	6.7
Census 2011	8.6	8.2	9.0	8.8	8.1

Source: Census of India

It is observed that the difference of per cents of elderly to total population in rural and urban areas is narrowing because of reduction of disparities of population in rural and urban areas regarding social, economic, health care and other aspects. Per cents of elderly to total population in India according to census 2011 are 8.2 and 6.4 for Hindu and Muslim population respectively and those for scheduled caste (SC) and scheduled tribe (ST) population are 7.8 and 6.9 respectively. Per cent of elderly is lowest in case of Muslim population, next lowest is in case of scheduled tribe population because of high fertility and low literacy rate. Reason behind the variations of per cent of elderly to total population over state to state, religion to religion, localities of residence, communities, sex is the different disparities of population.

The percent distribution of population by age groups in India for the census years 1961 – 2011 is provided in Table 5.

Table 5: Percent Distribution of Population by Age Groups in India

Source	Age groups (years)			Total
	0 - 14	15 - 59	60 -	
Census 1961	41.1	53.3	5.6	100
Census 1971	42.0	52.0	6.0	100
Census 1981	39.7	53.9	6.4	100
Census 1991	37.6	55.7	6.7	100
Census 2001	35.5	57.1	7.4	100
Census 2011	31.0	60.4	8.6	100

Source: Census of India

In India, per cent of persons aged 0 – 14 years has been decreasing and that aged 60- years has been increasing, but that aged 15 – 59 years has been fluctuating resulting reduction of labour force.

Per cent distribution of population by age groups in West Bengal for the census years 2001 and 2011 is provided in Table 6. In West Bengal, per cent of persons aged 0 – 14 years has been decreasing, but those for other age groups 15 – 59 and 60- years have been increasing. In West Bengal, rate of reduction of persons aged 0 – 14 years is higher than that in India. Per cent of persons aged 15 – 59 years in West Bengal is higher than that in India implying that position of workforce in West Bengal is better than that in India. Rate of growth of elderly in West Bengal over 2001 – 2011 is higher than that in India.

Table 6: Percent Distribution of Population by Age Groups in West Bengal

Source	Age groups (years)			
	0 - 14	15 - 59	60 -	Total
Census 2001	33.3	59.6	7.1	100
Census 2011	27.2	64.3	8.5	100

According to census 2011, sex ratios for elderly persons living in rural areas were in general higher than those for elderly persons living in urban areas. Most of the states/union territories in India have already achieved targeted replacement fertility rate of 2.1, even for some of them it has become less than 2.1, but the states like Uttar Pradesh and Bihar continue to lag behind with the rates 3.1 and 3.4 respectively. That rate of West Bengal was 1.64 in 2013. Muslims are the fastest growing group in the religious mosaic of India. The data on population by religious communities of Census 2011 show that between 2001 and 2011, Hindu population grew by 16.76 per cent, while that of Muslims by 24.6 per cent. The fertility rate is falling faster in Muslims than in Hindus. Data from the last three National Family Health Surveys (NHFS) show that the gap between Muslim and Hindu fertility rates is narrowing (The Hindu, 2015). But the difference in fertility rates of the two communities is bigger in some states/union territories. Indian mortality rate was 7.35 in 2014, it was 6.23 in 2009.

Age-sex distributions of total population in India are provided through the following population pyramids (Figures 1-3). The change from a very broad base in 2001 to a shrunken base in 2011 indicates a decline in fertility leading to an increase in the proportion of elderly population.

Figure 1: Population Pyramids for India (Total) for 2001 and 2011

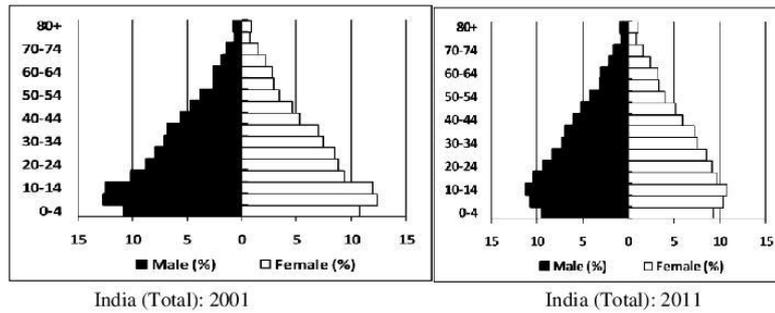


Figure 2: Population Pyramids for India (Rural) for 2001 and 2011

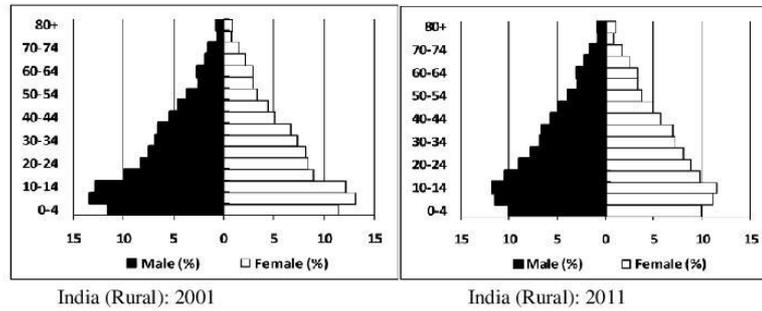
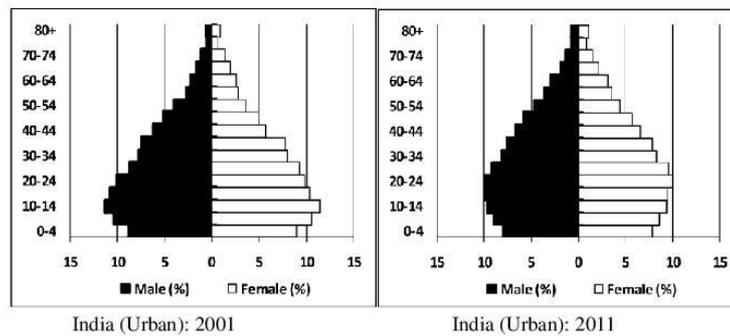


Figure 3: Population Pyramids for India (Urban) for 2001 and 2011



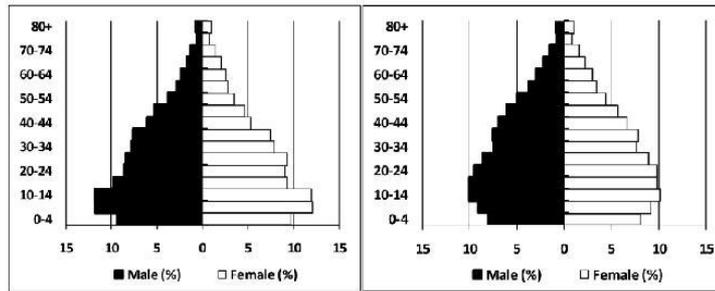
Shapes of population pyramids in case of Hindu and Muslim populations are shrunken base and broad base respectively which indicates that the rate of ageing in Hindu population is more than that in Muslim. Again the rate of shrinking of population pyramid from 2001 to 2011 in case of urban population is lesser than that in case of rural population which indicates that the rate of increase of ageing in case of urban population is lesser than that in rural population.

5.0 Population Ageing in West Bengal Compared to India

Age-sex distributions of total population in West Bengal are provided through the following population pyramids (Figures 4-6). West Bengal having 19 districts – classified two sub-states namely North Bengal consisting of 6 districts and South Bengal consisting of 13 districts (according to Census of India 2011). First 6 districts mentioned in Table 7 belong to North Bengal and the rests belong to South Bengal. Districts of North Bengal on an average are less developed, less industrialized etc as compared with those of South Bengal. Dinajpur (S) of North Bengal was having lowest population and 24 Parganas (N) of South Bengal was having highest population. Three districts of West Bengal, namely, Murshidabad, Malda and Dinajpur (N) are having top most Muslim-majority population with 66.3, 51.3 and 49.9 per cent respectively Muslims of total population; respective per cent of elderly are 6.3, 5.6 and 5.4 and respective per cent decadal growth rates of elderly in elderly population 51.0, 47.6 and 50.7 which are top most three growth rates among those for districts of West Bengal. The per cent of elderly for the districts of West Bengal along with West Bengal and India are presented in Figure 7. Top most 5 districts with high per cent of elderly of West Bengal are Kolkata, 24 Parganas (N), Hugli, Nadia, Bankura - all of them belong to South Bengal while bottom most 5 districts with low per cent of elderly are Dinajpur (N), Malda, Jalpaiguri, Murshidabad, Birbhum. Dinajpur (N), Malda and Jalpaiguri belong to North Bengal and the districts Murshidabad, Malda and Dinajpur (N) are having Muslim-majority population. Top most three districts with respect to Scheduled Tribe populations are Jalpaiguri, Purullya and Dinajpur (S) having 18.9, 18.5 and 16.4 per cent Scheduled Tribe populations respectively with respective per cent decadal growth rates of elderly in elderly population 29.3, 38.9 and 38.7 having very low HDI compared to India, West Bengal and most of the districts of West Bengal.

In 2004, Human Development Indices (HDI) of Kolkata and Malda were highest (0.78) and lowest (0.44) respectively among the districts of West Bengal (www.wbplan.gov.in). All the three Muslim dominated districts had very low HDI compared to India, West Bengal and all other districts of West Bengal except Birbhum.

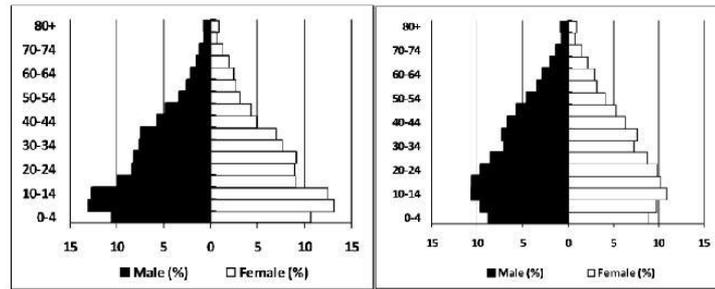
Figure 4: Population Pyramids for West Bengal (Total) for 2001 and 2011



West Bengal (Total): 2001

West Bengal (Total): 2011

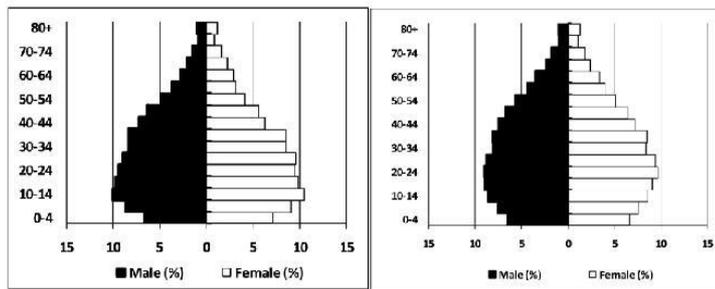
Figure 5: Population Pyramids for West Bengal (Rural) for 2001 and 2011



West Bengal (Rural): 2001

West Bengal (Rural): 2011

Figure 6: Population Pyramids for West Bengal (Urban) for 2001 and 2011



West Bengal (Urban): 2001

West Bengal (Urban): 2011

Table 7: Per Cent of Elderly of India, West Bengal and Districts of West Bengal

	Person 2001	Person 2011	% Decadal growth of elderly in general population 2001-11	% Decadal growth of elderly in elderly population 2001-11	2011							
					Male	Female	Hindu person	Muslim person	Rural person	Urban person	SC person	ST person
India	7.4	8.6	14.9	35.5	8.2	9.0	8.9	6.4	8.8	8.1	7.8	6.9
West Bengal	7.1	8.5	18.4	35.8	8.2	8.8	9.4	6.1	7.9	9.8	7.6	7.0
District of West Bengal												
Darjeeling	6.6	7.7	14.9	33.4	7.9	7.4	7.7	4.5	7.4	8.1	6.4	7.6
Jalpaiguri	6.1	6.9	12.8	29.3	6.9	6.8	7.2	5.3	6.4	8.1	7.1	4.8
CoochBehar	6.9	7.7	13.4	26.6	7.5	7.9	8.1	6.3	7.4	10.0	7.5	6.9
Dinajpur (N)	5.1	6.3	11.2	50.7	6.3	6.3	7.2	5.4	6.1	7.5	6.8	6.0
Dinajpur (S)	6.4	8.0	21.6	38.7	7.8	8.2	8.6	6.3	7.5	10.9	7.5	7.3
Malda	5.2	6.4	11.8	47.6	6.2	6.6	7.2	5.6	6.3	6.9	6.9	6.3
Murshidabad	5.6	7.0	13.6	51.0	6.6	7.5	8.6	6.3	7.1	6.8	7.3	6.1
Birbhum	5.5	7.3	19.0	56.1	6.9	7.8	8.1	6.1	7.2	8.5	6.3	6.9
Bardhaman	6.5	8.1	21.6	39.7	7.7	8.5	8.6	6.5	8.1	8.2	6.5	5.7
Nadia	8.3	9.4	18.6	27.4	8.9	10.0	10.2	7.2	8.9	10.8	9.1	7.0
24 Parganas (N)	8.2	9.9	24.1	35.3	9.9	10.0	11.2	6.5	8.2	11.3	9.0	7.9
Hugli	8.0	9.8	29.3	34.8	9.6	10.1	10.4	7.1	9.0	11.1	7.5	6.4
Bankura	7.3	9.3	25.3	44.1	8.4	10.2	9.5	6.2	9.2	10.4	7.7	9.0
Purulliya	7.2	8.7	18.1	38.9	8.2	9.3	9.0	5.9	8.8	8.2	7.5	8.4
Haora	7.7	8.8	17.4	30.7	8.6	9.0	10.0	5.5	8.6	8.9	7.7	5.3
Kolkata	9.9	11.8	-100.3 ^a	16.9	11.7	11.8	13.3	6.1		11.8	7.7	7.2
24 Parganas (S)	6.8	7.9	13.7	36.7	7.7	8.1	9.2	5.5	7.6	8.7	8.3	7.4
Medinipur (W)	7.3	8.6	18.2 ^b	36.3	8.2	9.0	8.9	5.9	8.5	9.4	7.6	7.7
Medinipur (E)		8.7			8.6	8.8	9.1	6.1	8.8	7.8	8.0	6.0

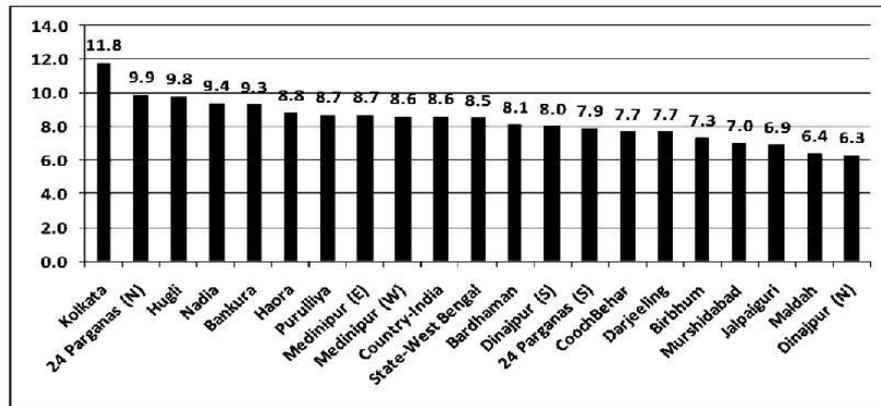
Source: Census of India, 2001 and 2011

^aFor district Kolkata like the state Nagaland, over 2001 to 2011, number of elderly persons increased, but number of total persons decreased,

^bDistrict Medinipur was bifurcated into two districts Medinipur (E) and Medinipur (W) after census 2001

It may be mentioned that per cents of elderly to total population of the districts of North Bengal are lower than those of India and West Bengal. All districts shown on higher side in respect of per cents of elderly of India and West Bengal in Figure 7 belong to South Bengal.

Figure 7: Per cent of Elderly for Districts of West Bengal Along with West Bengal and India in 2011



Source: Census of India

According to Census of India, 2011, among all districts of West Bengal, coefficients of correlation of per cent of elderly with per cent decadal growth rate of elderly in general population and HDI are -0.864 and 0.708 respectively. Regression equations of per cent of elderly of districts of West Bengal with indicators like per cent decadal growth rate of elderly in general population and HDI are presented below. The regression equation of per cent of elderly of districts of West Bengal on per cent decadal growth rate of elderly in general population is as below:

Per cent of elderly = $11.476 - 0.223 * \text{per cent Decadal growth rate of elderly in general}$

S.E. (0.474) (0.032) population

(P-value <0.001) $R^2 = 0.746$

The above regression equation of per cent of elderly of districts of West Bengal on per cent decadal growth rate of elderly in general population explains 74.6 per cent of total variation of per cent of elderly of districts of West Bengal.

The regression equation of per cent of elderly of districts of West Bengal on HDI is as below:

Per cent of elderly = $2.348 + 10.455 * \text{HDI}$ $R^2 = 0.500$

S.E. (1.465) (2.532) (p-value <0.001)

The above regression equation of per cent of elderly of districts of West Bengal on HDI explains 50.0 per cent of total variation of per cent of elderly of districts of West Bengal.

Sex ratio of elderly and general population in India and West Bengal is provided in Table 8. Generally sex ratios of elderly are higher than those of general population with some exceptions like in Darjeeling district. Sex ratios of elderly and of general population are very close in case of (a) Muslim population of both India and West Bengal and (b) urban population of West Bengal.

Table 8: Sex Ratio of Elderly and General Population in India and West Bengal

	Total	Hindu	Muslim	Rural	Urban	SC	ST
India	1033 (943)	1035 (939)	995 (951)	1036 (949)	1027 (929)	1043 (945)	1120 (990)
West Bengal	1010 (950)	1015 (948)	979 (951)	1048 (953)	949 (944)	1074 (951)	1130 (999)

Note: Figures outside and inside brackets provide sex ratios of elderly, general population respectively
Source: Census of India, 2011

Per cent of elderly, sex ratio among elderly according to locality of residence and age-group in India and West Bengal are provided in Table 9. Oldest-old group (aged 80- years) grows faster than the other elderly age groups and having higher sex ratio than other elderly age groups. By 2025, India is expected to reach 12.6 per cent of elderly in its total population (Source: shodhanga.inflibnet.ac.in).

Per cent distribution of households by the number of elderly members in India and West Bengal are provided in Table 10. More than 65 per cent of households in India and West Bengal do not have any elderly members. Nearly 22 and 8 per cent of households in India and West Bengal are having one and two elderly members respectively. Reasons behind the majority of households not having any elderly members are (a) present trend of households being nuclear family, (b) elderly members like to reside separately from their sons, daughters to stay with dignity and independently, to avoid accommodation problem and/or adjustment problems with other family members etc.

Life expectancy in India has increased in rural and urban areas. At birth, in rural areas, it has increased from 48 years in 1970-75 to 67.1 years in 2011-15; while in urban areas, it has increased from 58.9 years to 71.9 years. Kerala has got the highest life expectancy at birth followed by Maharashtra and Punjab. The life expectancies at birth in Kerala are 72.2 years and 78.2 years for males and females respectively; those at age

60 years in Kerala are 18.2 years and 22.1 years for males and females respectively as per the SRS Report 2011-15. Life expectancy at birth and at 60 years in the period 2011-15 in India and West Bengal are provided in Table 11.

Table 9: Per cent of Elderly, Sex Ratio among Elderly According to Locality of Residence and Age-Group in India and West Bengal

	Age group	Total			Sex ratio	Rural			Sex ratio	Urban			Sex ratio
		Percent of elderly				Percent of elderly				Percent of elderly			
		Person	Male	Female		Person	Male	Female		Person	Male	Female	
India	60-64	3.1	3.0	3.2	1014	3.2	3.0	3.3	1033	3.0	3.0	3.1	971
	65-69	2.2	2.1	2.3	1044	2.3	2.2	2.4	1054	2.0	1.9	2.1	1018
	70-74	1.6	1.6	1.6	990	1.7	1.6	1.7	979	1.4	1.4	1.5	1020
	75-79	0.8	0.7	0.8	1056	0.8	0.7	0.8	1050	0.8	0.7	0.8	1069
	80+	0.9	0.9	1.0	1137	1.0	0.9	1.0	1096	0.9	0.8	1.0	1236
	60-	8.6	8.2	9.0	1033	8.8	8.4	9.2	1036	8.1	7.7	8.5	1027
	All ages				943				949				929
West Bengal	60-64	3.0	3.0	3.0	952	2.8	2.8	2.9	981	3.4	3.5	3.4	903
	65-69	2.2	2.1	2.2	1000	2.1	2.0	2.2	1046	2.4	2.4	2.4	923
	70-74	1.5	1.5	1.6	1025	1.4	1.3	1.5	1080	1.8	1.8	1.8	937
	75-79	0.8	0.8	0.9	1054	0.7	0.7	0.8	1101	1.0	1.0	1.0	982
	80+	1.0	0.9	1.1	1173	0.9	0.8	1.0	1189	1.2	1.1	1.3	1150
	60-	8.5	8.2	8.8	1010	7.9	7.5	8.3	1048	9.8	9.8	9.8	949
	All ages				950				953				944

Source: Census of India, 2011

Table 10: Per cent Distribution of Households by Number of Elderly Members in India and West Bengal

No. of elderly members in household	India			West Bengal		
	Total	Rural	Urban	Total	Rural	Urban
None	68.7	67.5	71.2	69.6	71.2	66.2
1	21.6	22.1	20.5	23.3	22.4	25.3
2	9.3	9.9	7.9	6.8	6.2	7.9
3	0.3	0.4	0.3	0.2	0.2	0.5
4 or more	0.1	0.1	0.1	0.1	0.0	0.1

Source: Census of India, 2011

Table 11: Life Expectancy at Birth and at 60 Years in Period 2011-15 in India and West Bengal

	At age (years)	Total	Male	Female
India	0	68.3	66.9	70.0
	60	18.0	17.1	18.9
West Bengal	0	70.5	69.4	71.8
	60	17.9	17.3	18.7

Source: Sample Registration System (SRS) Office of the Registrar General

For 2015, the age-specific death rate per 1000 population for age-group 60-64 years was 23.7 for rural areas and 13.6 for urban areas. Altogether it was 20.3 for the age-group 60-64 years. As regards to sex, it was 22.0 for males and 18.4 for females. Age-specific death rate per 1000 of elderly according to sex and locality of residence in India and West Bengal is provided in Table 12.

Table 12: Age-Specific Death Rate per 1000 of Elderly in India and West Bengal (Sex and Location Specific)

	Age-group (years)					
	60-64	65-69	70-74	75-79	80-84	85 -
India (Total)	20.3	28.6	41.1	65.2	116.2	209.5
India (Male)	22.0	31.0	44.7	69.8	123.5	238.1
India (Female)	18.4	26.1	37.6	60.8	109.4	186.9
India (Rural)	23.7	31.1	43.4	65.3	119.7	203.6
India (Urban)	13.6	23.4	36.1	64.8	109.1	222.9
West Bengal (Total)	18.9	26.3	41.8	66.8	108.7	166.1

Source: Sample Registration System (SRS) Office of the Registrar General

Some of the economic indicators for the elderly are old-age dependency ratio, headship of household, state of economic independence, economically dependence, economically independence by number of dependents, working status etc. The old-age dependency ratio has an increasing trend and the ratio has increased from 10.9 per cent in 1961 to 14.2 per cent in 2011. The gap between female and male old-age dependency ratio also has an increasing trend and those two ratios are 14.9 and 13.6 respectively in 2011. There has been considerable gap in all the period of that ratio for rural and urban areas, because of a relatively higher concentration of working age population in urban areas. The ratios are 15.1 and 12.4 for rural and urban areas respectively.

Among the major states the overall old-age dependency ratio varied from 10.4 per cent in Delhi to 19.6 per cent in Kerala. The old-age dependency ratio of 2011 in India and West Bengal by sex and locality of residence is provided in Table 13.

Table 13: Old-Age Dependency Ratio of 2011 in India and West Bengal

	Total	Male	Female	Rural	Urban
India	14.2	13.6	14.9	15.1	12.4
West Bengal	13.2	12.7	13.7	12.5	14.5

Source: Office of the Registrar General, India

Per cent distribution of households having elderly head by locality of residence and sex in India and West Bengal according to census 2011 is provided in Table 14. Since elderly females are expected to live more years than elderly males, per cent of elderly female heads is almost twice of that of elderly male heads. Per cent of elderly female head in West Bengal is more than that of India. Nearly 20 per cent of households in India and West Bengal are having elderly heads.

Table 14: Per cent Distribution of Households having Elderly Head by Locality of Residence and Sex in India and West Bengal

	Locality of residence	Sex of elderly head		
		Person	Male	Female
India	Total	22.4	19.9	38.4
	Rural	23.0	20.7	38.8
	Urban	21.1	18.4	37.7
West Bengal	Total	21.5	18.7	40.5
	Rural	19.3	16.9	38.0
	Urban	26.2	22.7	44.1

Source: Census of India, 2011

National Sample Survey Office (NSSO) in 2004 mentioned that 65 per cent of the elderly in India had to depend on others for their day-to-day maintenance. About 86 and 83 per cent of elderly in rural and urban areas were dependent on others either partially or fully. The elderly males were much better off as majority of them (51 and 56 per cent of them in rural and urban areas respectively) did not depend on others for their livelihood. State-wise data on economic independence mentioned that in rural areas, the

per cent of elderly males who were fully dependent on others is highest in Kerala (43) and is lowest in Jammu and Kashmir (21) whereas for females the figure is highest in Assam (81) and lowest in Haryana (44). In urban areas, highest per cent of fully dependent elderly males is 38 in Bihar and lowest is 20 in Himachal Pradesh. The elderly female in urban areas with highest per cent of fully dependent elderly is 83 in Jammu and Kashmir and lowest is 50 in Haryana. Per cent distribution of elderly by their state of economic independence in India and West Bengal is provided in Table 15.

Table 15: Per cent Distribution of Elderly by State of Economic in Dependence in India and West Bengal

		Male			Female		
		Not dependent on others	Partially dependent on others	Fully dependent on others	Not dependent on others	Partially dependent on others	Fully dependent on others
India	Rural	51	15	32	14	12	72
	Urban	56	13	30	17	10	72
West Bengal	Rural	46	18	33	6	8	82
	Urban	66	10	23	18	8	72

Source: NSSO, 60th Round, (January – June 2004)

Per cent distribution of economically dependent aged persons by category of persons supporting the elderly in India is provided in Table 16. In all cases, about 70 – 85 per cent of dependent elderly are supported by their own children; 2 – 3 per cent by grandchildren; about 6 per cent by others. In case of supporting by spouse, 16 – 19 per cent elderly females are supported by their male spouse, whereas 6 – 7 per cent of elderly males are supported by their female spouse.

Table 16: Per cent Distribution of Economically Dependent Elderly by Category of Persons Supporting Elderly in India

		Category of persons supporting			
		Spouse	Own children	Grandchildren	Others
Rural	Person	13	78	3	6
	Male	7	85	2	6
	Female	16	75	3	6
Urban	Person	15	76	3	6
	Male	6	87	2	6
	Female	19	71	3	7

Source: NSSO, 60th Round, (January – June 2004)

Of the economically independent elderly men, more than 90 per cent reported to be living with one or more dependents, while among economically independent elderly women, about 65 per cent were having one or more dependents. Elderly females were having lesser number of dependents than elderly males in both rural and urban areas. Per cent distribution of economically independent elderly by number of dependents in India is provided in Table 17.

Table 17: Per cent Distribution of Economically in Dependent Elderly by Number of Dependents in India

		Number of dependents					Total
		0 (Nil)	1	2	3 to 5	6 or more	
Rural	Person	12	29	26	22	11	100
	Male	7	32	23	25	13	100
	Female	32	18	37	10	4	100
Urban	Person	15	34	30	18	5	100
	Male	8	40	26	21	6	100
	Female	34	15	42	8	2	100

Source: NSSO, 60th Round, (January – June 2004)

As per census 2011, 66.4 per cent of elderly males, 28.4 per cent of elderly females in rural area engaged in economic activity in the capacity of main or marginal worker (occasional worker). In urban areas it was only 46.1 per cent of elderly males and 11.3 per cent of elderly females engaged in economic activity. The proportions increased in 2011 for both elderly males and women as compared to census 2001 in both rural and urban areas. But the proportions increased from census 2001 to 2011 in case of elderly women are relatively higher than the proportions increased from census 2001 to 2011 in case of elderly males. Proportions of elderly engaged as main workers increased from census 2001 to 2011, but proportions of elderly males in rural areas decreased from census 2001 to 2011. Proportion of elderly non-workers in urban areas was remarkably higher than that in rural areas. About 50 per cent of elderly males of age-group 60-69 years in both rural and urban areas remained in engaged in working condition.

Alam and Yadav (2014) in their study pointed out that most surveys conducted in India and elsewhere deliberately avoided gathering information on personal income. They conducted a survey (the United Nations Population Fund (NNFPA, India) along with the Institute of Economic Growth (Delhi), Institute of Social and Economic Change (Bangalore) and Tata Institute of Social Sciences (Mumbai) in a major research project to study ageing issues in this country, including socio-economic and health conditions of

the elderly, in the states of Odisha, West Bengal, Maharashtra, Himachal Pradesh, Punjab, Tamil Nadu and Kerala which revealed that 74 per cent of elderly males and about 41 per cent of elderly females reported receiving some personal income and about 43 per cent of all elderly receiving no income.

Per cent of elderly working in India and West Bengal according to census 2011 is provided in Table 18.

Table 18: Per cent of Elderly Working in India and West Bengal

	Age-group (years)	Main worker			Marginal worker			Main worker + Marginal worker			
		Person	Male	Female	Person	Male	Female	Person	Male	Female	
India	Total	60 – 69	37.3	57.6	17.3	11.8	12.2	11.6	49.1	69.8	28.9
		70 – 79	24.3	39.3	9.5	8.1	9.7	6.5	32.4	49.0	16.0
		80 -	16.4	27.7	6.5	5.7	7.2	4.4	22.1	34.9	10.9
		60 -	31.4	49.4	14.0	10.2	11.0	9.4	41.6	60.4	23.4
	Rural	60 – 69	40.5	61.6	20.2	15.0	15.1	14.9	55.5	76.7	35.1
		70 – 79	27.0	43.0	11.1	10.1	11.8	8.3	37.1	54.8	19.4
		80 -	17.4	28.5	7.3	7.0	8.6	5.5	24.4	37.1	12.8
		60 -	34.3	53.0	16.3	12.8	13.4	12.1	47.1	66.4	28.4
	Urban	60 – 69	29.2	48.1	10.2	4.6	5.6	3.5	33.8	53.7	13.7
		70 – 79	17.7	30.1	5.7	3.3	4.3	2.3	21.0	34.4	8.0
		80 -	14.0	25.6	4.7	2.9	3.9	2.0	16.9	29.5	6.7
		60 -	24.4	41.0	8.3	4.1	5.1	3.0	28.5	46.1	11.3
West Bengal	Total	60 – 69	29.6	50.9	7.6	8.8	10.8	6.8	38.4	61.7	14.4
		70 – 79	16.5	29.5	3.9	5.1	7.1	3.2	21.6	36.6	4.1
		80 -	13.1	24.1	3.7	4.2	5.5	3.0	17.3	29.6	6.7
		60 -	24.1	42.2	6.1	7.2	9.3	5.3	31.3	51.5	11.4
	Rural	60 – 69	31.1	55.0	7.3	11.6	14.6	8.8	42.7	69.6	16.1
		70 – 79	17.7	32.9	3.7	6.5	9.5	3.8	24.2	42.4	7.5
		80 -	12.7	24.0	3.2	5.1	6.9	3.6	17.6	30.9	6.8
		60 -	25.4	45.9	5.8	9.6	12.4	6.9	35.0	58.3	12.7
	Urban	60 – 69	26.9	43.9	8.2	3.7	4.5	3.0	30.6	48.4	11.2
		70 – 79	14.6	24.3	4.4	2.6	3.2	1.9	17.2	27.5	6.3
		80 -	13.6	24.2	4.4	2.8	3.4	2.2	16.4	27.6	6.6
		60 -	21.8	36.3	6.6	3.3	4.0	2.6	25.1	40.3	9.2

Source: Census of India, 2011

Health and social status of elderly in India and West Bengal are presented in the subsequent tables. Literacy levels among elderly of (a) rural and urban areas, (b) males and females have improved tremendously over 2001 to 2011. There are huge gaps of

literacy rates of elderly between (a) rural and urban areas and (b) males and females. Literacy rates for elderly in West Bengal are better than those in India. Per cent of literacy among elderly in India and West Bengal for the censuses 2001 and 2011 is provided in Table 19.

Table 19: Per cent of Literacy among Elderly in India and West Bengal for Censuses 2001 and 2011

	Census	Total			Rural			Urban		
		Person	Male	Female	Person	Male	Female	Person	Male	Female
India	2001	36.3	52.8	20.3	29.0	45.5	13.0	58.1	75.0	41.8
	2011	43.5	59.1	28.5	34.2	50.5	18.4	66.0	79.6	52.7
	% Decadal growth	63.9	76.9	51.4	52.8	69.2	37.6	79.2	87.3	71.3
West Bengal	2001	48.8	68.8	29.7	38.5	61.2	17.9	69.3	82.8	55.2
	2011	53.5	70.0	37.1	42.2	61.5	23.7	72.9	83.9	61.2
	% Decadal growth	66.6	73.3	59.2	55.0	62.4	46.6	79.8	86.1	73.2

Source: Census 2001 and 2011

It is observed that despite illness higher proportion of elderly men seemed to be feeling better health condition than elderly women. More elderly men and women in urban areas felt to have good/fair health as compared to elderly in rural areas. Per cent distribution of elderly with illness or otherwise by their perception about current state of health in India and West Bengal is provided in Table 20.

Table 20: Per cent of Elderly with Illness or Otherwise by their Perception about Current State of Health in India and West Bengal

		Elderly with illness own perception about current state of health			Elderly without illness own perception about current state of health		
		Excellent	Good/ fair	Poor	Excellent	Good/ fair	Poor
India	Male	2	59	37	8	73	13
	Female	2	54	42	5	74	17
West Bengal	Male	3	49	47	8	64	17
	Female	1	48	47	2	60	27

Source: NSSO, 60th Round, (January – June 2004)

Per cent distribution of elderly by state of physical mobility in India is provided in Table 21. In both rural and urban areas, elderly men are more mobile than elderly women.

Table 21: Per cent Distribution of Elderly by State of Physically Mobility in India

	Male			Female		
	Mobile	Confined to bed	Confined to home	Mobile	Confined to bed	Confined to home
Rural	91.2	1.2	5.5	89.1	1.4	7.4
Urban	91.7	1.7	5.1	88.5	1.7	8.3

Source: NSSO, 60th Round, (January – June 2004)

Census data of 2011 pointed out that locomotor and visual disability are the most prevalent disabilities among elderly in both the areas. Distribution of number of disabled persons per 1000 elderly in India and West Bengal is provided in Table 22. Prevalence of disabilities is higher in rural areas than that in urban areas.

Table 22: Distribution of Number of Disabled Persons Per 1000 Elderly in India and West Bengal

		Disability type								
		Total disabilities	In seeing	In hearing	In speech	In movement	Mental retardation	Mental illness	Any other	Multiple disabilities
India	Total	52	13	10	2	13	1	1	6	6
	Rural	73	19	14	3	19	1	1	8	9
	Urban	42	9	8	2	10	1	1	6	4
West Bengal	Total	47	13	8	2	10	1	1	6	7
	Rural	52	15	9	1	11	1	1	6	8
	Urban	39	10	7	2	8	1	1	6	4

Source: Census of India, 2011

Census of India 2011 pointed out that per cent of currently married elderly women was lower than the per cent of currently married elderly men. After age of 70 years, more than 60 per cent of women become widows. Per cent distribution of marital status of elderly in India and West Bengal is provided in Table 23.

Table 23: Per cent Distribution of Marital Status of Elderly in India and West Bengal

		Never married		Currently married		Widowed		Separated		Divorced	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
India	Total	2.9	2.0	82.1	49.6	14.6	47.8	0.3	0.4	0.2	0.2
	Rural	2.7	1.7	81.5	50.4	15.4	47.4	0.3	0.4	0.1	0.1
	Urban	3.3	2.9	83.6	47.7	12.7	48.8	0.3	0.5	0.2	0.2
West Bengal	Total	3.1	2.2	85.7	39.9	10.8	57.2	0.4	0.5	0.2	0.2
	Rural	2.2	1.5	86.5	38.7	10.9	59.0	0.4	0.5	0.2	0.2
	Urban	4.6	3.3	84.3	42.1	10.6	54.0	0.4	0.4	0.2	0.2

Source: Census of India, 2011

Living arrangement of elderly is very important indicator of social status and well-being. More than 56 per cent of elderly live with their spouse and 32 per cent of elderly live with their children. About 5 per cent of elderly live alone and 4 per cent live with other relations and non-relations. Per cent distribution of elderly by their living arrangements in India and West Bengal is provided in Table 24.

Table 24: Per cent Distribution of Elderly by their Living Arrangements in India and West Bengal

	Type of living arrangement				
	Alone	With spouse only	With spouse and other members	With children	With other relations and non-relations
India	5.2	12.0	44.8	32.1	4.4
West Bengal	3.4	7.8	44.4	35.6	5.7

Source: NSSO, 60th Round, (January – June 2004)

6.0 Concluding Observations

India is a vast country with tremendous diversities in many respects. In the present paper, we have studied population ageing, its trend and related issues like sex ratio; per cent households having elderly members; life expectancy of elderly at birth and at age 60 years; age-specific death rates of elderly; economic status of elderly including

old-age dependency, per cent of elderly by state of economic independence, economic dependence, per cent of workers; health and social status of elderly including literacy rate, perception of health, physical mobility, disabilities, marital status and living arrangement in India and West Bengal through secondary data mostly from censuses of India and NSSO rigorously. Strongly significant correlations between (a) per cent of elderly and per cent decadal growth rate of elderly in general population (negative) and (b) per cent of elderly and human development index (positive) have been observed and two regression equations of (a) per cent of elderly on per cent decadal growth rate of elderly in general population and (b) per cent of elderly on human development index have been developed. There is a huge variation of population ageing among the districts of West Bengal. Kolkata and Dinajpur (N) are having highest (11.77) and lowest (6.28) per cent of elderly respectively. District with Muslim-dominated districts are having low per cent of elderly, but their per cent decadal growth rates of elderly in general population are higher than those of other districts. Low per cent of elderly have been noticed among ST population. Reasons behind the variations of population ageing have been studied. From the data on elderly of West Bengal, it may be inferred that the present socio-economic-physical conditions of elderly of West Bengal may not be very good, but not worse and have improved than earlier. The present study stands for a strong evidence for the Preston's hypothesis (Preston, 1975) that individuals born in richer countries, on average, can expect to live longer than those born in poor countries.

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Appendix – A.2

**Constitutional Provisions and Legal Protection, Government
Programmes and Policies for the Welfare of Elderly in India and
West Bengal
– A Review**

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**CONSTITUTIONAL PROVISIONS AND LEGAL
PROTECTION, GOVERNMENT PROGRAMMES AND
POLICIES FOR THE WELFARE OF ELDERLY IN INDIA
AND WEST BENGAL – A REVIEW**

Archita Nayak¹ & Prof. K.K. Bagchi²

I. Introduction

Population ageing is worldwide and increasing phenomenon and India is no exception. With fast changing socio-economic scenario, industrialization, rapid urbanization, higher ambitions among the youth and the increasing participation of women in the workforce, roots of traditional joint family system has been eroding very fast. When the elderly need family support most, they have to live on their own, even basic needs and rights of many of them are not met. Social marginalization, loneliness, isolation, negligence, harassment in elderly age and even attempt to possess forcefully and unlawfully of properties of elderly and in some extreme cases, murder of elderly lead violation of Human Rights of elderly.

The right to social security ensures that everyone, regardless of age, sex, caste, community, race, religion, language, locality of residence or ability to work, is guaranteed the means necessary to procure basic needs and services. Three key human rights principles are fundamental to guaranteeing the right of social security: (a) comprehensiveness (social security covers all the risks involved in the loss of means of subsistence for reasons beyond person's control), (b) flexibility (the retirement age should be flexible depending on the occupations performed and the working ability of the elderly, with due regard to demographic, economic and social factors) and (c) non-discrimination (social security must be provided without discrimination based on health status, race, ethnicity, age, sex, disability, language, religion, national origin, income or social status). "Everyone, as a member of society, has the right to social security..." included in the Article 22 of the UN 1948 Universal Declaration of Human Rights emphasizing that social security is an important part of human rights and every nation agrees on. Unfortunately, in India, senior citizens are not aware of their human rights due to high predominance of illiteracy and lack of awareness. On the other hand, due to relatively high physical as well as psychological

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vulnerability, their cries for help remain within four-walls, as a result, only a few cases of violation of human rights of elderly become known. In general, the rights for the elderly stem from the principles of dignity and non-discrimination. The rights of elderly can be grouped into three main categories: protection, participation and image. Protection refers to securing the physical, psychological and emotional safety of elderly with regard to their unique vulnerability to abuse and ill treatment. Participation refers to the need to establish a greater and significant active role for elderly in society. Image refers to the need to define a significant positive, less degrading and discriminatory idea of their identity and capabilities³. Rights related to the elderly are (a) right to dignity; (b) right to freedom from abuse, neglect, or exploitation; (c) right to from discrimination; (d) right to adequate healthcare; (e) right to maintenance; (f) right to material assistance; (g) right to property; (h) right to participation in society; (i) right to work duties; duty of third-party caretakers, duty of the family, duty of the state.

A policy is a principle or rule to guide decisions and achieve rational outcomes. It is an intention, and is implemented as a procedure. It aims to the process of making important institutional decisions, including the identification of different alternatives such as programmes or spending priorities, and choosing best possible alternatives among them on the basis of the impact they will have. Policies may be considered as political, management, financial and administrative mechanisms arranged to achieve explicit goals. For a developing country like India, population ageing may pose gigantic pressures on various socio-economic atmosphere including pension outlays, health care expenditures, fiscal discipline, savings etc. Elderly faces the most urgent need for providing care to them in a comprehensive and coordinated manner. The task of implementing the policy is a national responsibility, involving combined efforts of the government, non-government organizations (NGOs) and other social units. It should be made mandatory for all participating ministers, departments, state governments and NGOs to accelerate and participate in the programmes concerned with the welfare of elderly. A governance structure requires to be put in place which provides for transparency, accountability, evaluation and monitoring of performance and also provides a fair amount of autonomy. The goals of the policies and programmes for elderly are the well-being for them aiming to help them to live at the last phase of life with purpose, dignity, healthy and peace. The policies would be such that the nation would extend support for financial security, health care, shelter, protection against abuse and exploitation, welfare, make available opportunities for their potential development, seek their participation,

³ Age-well Research & Advocacy Centre, Agewell Study on Human Rights of Older People in India, July 2014, pp. 5-6.

provide them services so that they may improve the quality of their lives and other requirements for them⁴.

Indian social system recognizes family as one of the institutions that meets the social, economic and emotional needs of the elderly. In Indian society, elderly has a better status on account of the value systems. Their wisdom and experience give them their authority. In that system, there exists a certain amount of love, respect and care for the elderly⁵. Elder Law refers to the area of legal practice pertaining to issues that affect elderly. The three focuses of elder law include estate planning; Medicaid, disability and long-term care; guardianship. Attorneys who work in the field of elder law bring more to their practice than an expertise in the appropriate area of law. They have knowledge of elderly and their unique needs as well as the myths related to competence and ageing. They are aware of the physical and mental difficulties that often accompany the ageing process. The International Day of Older Persons is October 1 of every year and World Elder Abuse Awareness Day is June 15 of every year.

The two main objectives of the paper are to review the constitutional provisions and legal protection for the elderly in India and to analyse the government programmes and policies for the welfare of elderly in India and West Bengal. The paper is organized as follows: Section I is introductory, Section II presents a brief review of literature, Section III traces out the Indian Constitutional provisions for the elderly, Section IV deals with the legal provisions relating to the welfare of the elderly, Section V analyses the government programmes and policies for the welfare of the elderly, Section VI deals with the pension system in India, Section VII has traced out the professional services to elderly in India, Section VIII deals with the additional policies and programmes for the welfare of the elderly in West Bengal and Section IX includes conclusion and suggestions. Information for the paper are data based on some published research papers, the Internet etc.

II. A Brief Review of Literature

Nayak, Bagchi and Nayak (2011) presented in the Indian scenario, population ageing, health problems for the elderly, provisions for social security, privileges and benefits; human rights and provisions for healthcare etc for the elderly, mental health, health care law etc⁶.

⁴ N. Sharma, Government Policies and Programmes for The Aged in India, *Indian Journal of Research*, Vol. 3 (7) pp. 207

⁵ S. Chakrabarty, Elderly People and Human Rights: An Indian Perspective in M. Chakrabarty (ed.) *Human Rights in Twenty First Century: An Anthology*. R. Cambray & Co. Pvt. Ltd. 2014

⁶ Nayak, Bagchi and Nayak, Right to Health for the Aged and Role of the State in Making Health Services, B.P. Dwivedi, G. Chakrabarty, R. Bandopadhyay and

Sharma (2014) discussed about government policies and programmes for the aged in India. It was mentioned that the goals of the policies are the well-being of elderly aiming to help elderly to live the last phase of their life with purpose, dignity, healthy and peace. The nation would extend support for financial, health care, shelter, welfare, protection against abuse, provide available opportunities for their potential development, seek their participation, and provide them services so that they can improve the quality of their lives and other requirements. The paper also mentioned Indian Constitutional provisions, legal measures and different services being provided to elderly⁷.

National Institute of Rural Development & Panchayati Raj, Hyderabad (2016) in Policy for the Aged: Opportunities and Challenges highlighted different policies for social security for the senior citizens in India and recommendations for the welfare for them. It also mentioned the initiatives taken by different Indian states and Union Territories including West Bengal⁸.

III. Indian Constitutional Provisions for Elderly

In the Constitution of India, Entry 24 in list III of Schedule VII deals with the “Welfare of labour, including conditions of work, provident funds, liability for workmen’s compensation, invalidity and old age pension and maternity benefits. Further, Art. 41 of Directive Principles of State Policy has particular relevance to Old Age Social Security”. Art. 41 of Indian Constitution deals with the State’s role in providing social security to the aged. According to this article, “The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in case of unemployment, OLD AGE, sickness and disablement and in other cases of undeserved want”.

Item No. 9 of the State List and Item 20, 23 and 24 Concurrent List relate to old age pension, social security and social insurance and economic and social planning.

The right of parents, without any means, to be supported by their children having sufficient means has been recognized by Section 125 (1) (d) of the Code of Criminal Procedure 1973, and Section 20(3) of the Hindu Adoption and Maintenance Act, 1956.

S. Biswas (eds), Public Health Law, Dept. of Law, University of North Bengal, 2011.

⁷ N. Sharma, Government Policies and Programmes for The Aged in India, 3(7) IJR 207 at p. 207-209.

⁸ National Institute of Rural Development & Panchayati Raj, Hyderabad, Policy for the Aged: Opportunities and Challenges

The Maintenance and Welfare of Parents and Senior Citizens Act, 2007 makes it as a legal obligation for the children and heirs to provide maintenance to senior citizens. The concept of right to healthcare, which evolved from the right to life is getting accepted in the present Act. It creates a positive duty on the part of the state governments to establish old age homes in every district⁹.

IV. Legal Measures

Referred to Section 125 of the Criminal Procedure Code, 1973, if any person refuses or neglects to maintain his/her parents, then a magistrate may order such a person to make a monthly allowance for the maintenance of his/her mother or father at a monthly rate not exceeding Rs 500.

The Hindu Adoption and Maintenance Act, 1956 enjoins children to look after their parents if parents are unable to maintain themselves out of their own earnings or other property. The Act is applicable to Hindus only. It defines maintenance as providing of food, clothing, residence, medical attendance and treatment. Here, the amount is left to the discretion of the court.

According to codified Muslim Law, children are required to maintain parents and paternal and maternal grandparents, if they are poor and cannot take care of themselves.

The Christians and Parsis have no personal laws providing for maintenance for the parents. Parents who wish to seek maintenance have to apply under provisions of the Criminal Procedure Code.

The Central Government introduced a bill in Parliament for better care of elderly in India. The bill titled "Older Persons (Maintenance, Care and Protection) Bill 2005" is intended to make relief simpler, speedier and less expensive. The bill has taken into account three thrust areas for legislation, namely, Maintenance, Care and Protection. Maintenance includes financial, housing requirement, protection of life and property, recreational and spiritual needs and grievance redressals. Maintenance from family will hitherto be a matter of right for the elderly. Care includes financial, housing requirement, clothing requirement, health requirement and companionship requirement from families and/or the state government in case of persons without family support or living below the poverty line (BPL). Protection includes protection of life and property of the elderly against exploitation including physical and mental abuse¹⁰.

⁹ Supra note 6.

¹⁰ Supra note 7.

V. Programmes and Policies for Welfare of Elderly in India

The Ministry of Social Justice and Empowerment is the nodal Ministry for the welfare of elderly. The Ageing Division in the Social Defence Bureau of the Department of Social Justice and Empowerment develops and implements policies and programmes for the elderly in close collaboration with state governments, NGOs and civil society. The Government of India announced a National Policy on Older Persons (NPOP) in 1999. National Council for Older Persons (NCOP) (reconstructed and renamed as National Council of Senior Citizens (NCSrC) in 2012) has been constituted by the Ministry of Social Justice and Empowerment to operationalise the NPOP. The Ministry has also launched a project called “Old Age Social and Income Security (OASIS)”. An Expert Committee is constituted under the project. In order to facilitate implementation of the National Policy, and to bring about a qualitative improvement in the programme intervention of the Ministry, on-going schemes were revised during 1998-99.

The Nodal Ministry implements the Central Sector Scheme of Integrated Programme for Older Person (IPOP). Under the scheme, financial assistance up to 90 per cent and in case state 95 per cent of the project cost is provided to Government/ Non-Governmental Organizations/ Panchayati Raj Institutions/ local bodies etc for constructing and maintaining old age homes, day care centres and mobile medicare units. Several innovative projects have been added as being eligible for assistance under the Scheme, some of these are Maintenance of Respite Care Homes and Continuous Care Homes, Running of Day Care Centres for Alzheimer's Disease/ Dementia Patients, Physiotherapy Clinics for older persons, Help-lines and Counselling Centres for older persons, Regional Resource and Training Centres, Training of Caregivers to the older persons, Awareness Generation Programmes for Older Persons and Care Givers, Formation of Senior Citizens Associations etc. Scheme of Assistance to Panchayati Raj Institutions/ Voluntary Organisations/ Self-Help Groups for Construction of Old Age Homes (OAHs)/ Multi Service Centres for Older Persons has been revised to enhance the one time construction grant for the old age homes/ multi service centres from Rs 5 lakhs to Rs 30 lakhs to eligible organizations.

The National Social Assistance Programme (NSAP) is a welfare programme being administered by the Ministry of Rural Development. The programme is being implemented in rural areas as well as in urban areas. The Government of India launched NSAP as a centrally sponsored scheme w.e.f. August 15, 1995. It includes two schemes relating to elderly:

- National Old Age Pension Scheme (NOAPS): Under the scheme, destitute aged 65 years and above are entitled to a monthly pension ranging over Rs 200/- to Rs 1000/-. At present, 18 states/UTs are

providing NOAPS. The amount of NOAPS for West Bengal is Rs 500/-. National Old Age Pension Scheme was renamed as Indira Gandhi National Old Age Pension Scheme (IGNOAPS).

- National Family Benefit Scheme: The benefit under the scheme to BPL household is lump sum amount of money on the death of primary breadwinner aged between 18 and 64 years. The ceiling of the benefit is Rs 5,000/- for death due to natural cause and Rs 10,000/- for accidental death,

Different privileges and benefits provided to elderly in India are:

- Old Age Pension for the general public,
- National Old Age Pension scheme (NOAPS),
- Old Age and Widow Pension in West Bengal, Maharashtra, Karnataka, Kerala,
- Annapurna scheme under which free food grains (wheat or rice) up to 10 kg. per month are provided to destitute elderly of 65 years or above who are otherwise eligible for old age pension but are not receiving it,
- Pension and Family Pension with Dearness Relief, Gratuity, Leave Encashment along with enhanced Pension after attaining ages 80, 85, 90, 95, 100 years with enhanced rates 20, 30, 40, 50 and 100 per cent of pension respectively (in case of central/state government permanent employees),
- Bank loans for Pensioners and Family Pensioners,
- Income Tax Rebate (Section 88B),
- Deduction in respect of medical insurance premium (Section 80D),
- Deduction in respect of medical treatment (Section 80DDB),
- Insurance Schemes for elderly through LIC: Jeevan Dhara, Jeevan Akshay, Jeevan Suraksha, Bima Nivash, Varishtha Pension Bima Yojana,
- Senior Citizens Unit Plan (SCUP),
- Senior Citizen Savings Scheme (SCSS) through Indian Post offices, banks (public like SBI, Private like ICIC) with Income Tax benefit (Section 80C),
- Medical Insurance Scheme,
- Group Medical Insurance,
- Jan Arogya,
- Reverse Mortgage Loan (RML),

- Concessions on travelling by road, train, air,
- Special Counters/ Separate Queue: Railway Ticket Booking, Income Tax Return, Electricity bill, hospital, bank,
- Old Age Homes,
- Helpline,
- Expeditious Disposal of Court Cases,
- Mobile Medicine Unit Programme,
- Geriatric clinics in several government and non-government hospitals,
- Banking with high return, home services, Special Senior Citizen ID card, Free International Debit Cards for Primary and Joint Accounts Holders, Customized Loan Offerings, Free Foreign Outward Remittances, Faster Inward Remittances, Faster Credit for collection of Foreign Cheques, Free Collection of outstation Cheques etc,
- Concessions at restaurants, hotels etc,
- Separate and/or Special Seating arrangements at train, bus, bank etc,
- Increase in retirement age and provisions of recruitment after retirement on semi-permanent/contractual/casual basis etc¹¹.

VI. Pension Systems in India

There are three major components to the Indian pension system: civil servants pension, the mandatory pension programs run by the Employees' Provident Fund Organisation of India and the unorganised sector pension called the National Social Assistance Programme (NSAP).

The State of Uttar Pradesh has implemented E-pension system which allows filling up of pension forms, checking, verification and payment using an online system.

India does not have a universal social security system. A large number of India's elderly are not covered by any pension scheme. Pension reforms and a pension system with greater reach will not only ensure citizens' welfare in their golden years but will also help the central and state governments cut their future liabilities. With these broad objectives in mind, the government of India set up an expert committee in 1998 to devise a new pension system for India. It recommended creating a pension system based on individual retirement accounts (IRAs). An individual would save and accumulate assets through his entire working life. Upon retirement, the individual would be able to use his pension assets to buy annuities from

¹¹ Supra note 6.

annuity providers and obtain a monthly pension. The pension amount would be governed by what the employees' pension fund account could earn from market investments. In line with the recommendations, the government set up its New Pension System (NPS). The NPS was launched in 2004 for central and state government employees, who had to subscribe mandatorily. In 2009, it was thrown open to all Indian citizens in the 18-60 age group. However, it has failed to take off in the voluntary segment given the anaemic subscriptions from the private sector.

All governments (central/state) are shifting to NPS for their civil servants, but Government of West Bengal has not yet considered it¹².

India needs sustainable pension system. The social security system in India has a big hole – an inadequate and disjointed pension system. “Pension schemes are engines of growth in many European countries and it can be so for India too.”, said Jan Nijssen, ING's global head pensions and CEO, Central Europe Insurance¹³.

VII. Professional Services to Elderly

Services related to elderly may be classified into two categories:

- i) Home care facility (old age home),
- ii) Elderly care services
 - (a) Home care facility (Residential facility)
 - Elderly friendly home facilities,
 - Nursing care,
 - Social activities,
 - Health care,
 - Tie up with hospitals for emergency care,
 - Nutritious food,
 - Housekeeping, laundry and security services,
 - Yoga and light physical activities,
 - Recreation,
 - Providing associations etc.
 - (b) Elderly care services

Under elderly care services, there are three kinds of offerings.

¹² Indian Pension System: Problems and rognosis, Ranadev Goswami, Fellow, Indian Institute of Management, Bangalore, p. 38.

¹³ Business Standard, Bangalore, September 16, 2004.

- i) Home service: Providing assistance for housekeeping including sweeping, cleaning clothes and/or mopping laundry, ironing, shopping for household, cooking light meals and so on.
- ii) Personal service: Providing assistance for maintaining personal hygiene viz. bathing, dressing, shaving, toileting, contingency care, medication needs and so on.
- iii) Respite service: This refers to service for a short period of time providing rest and relief to family members who are assisting with the care of their elderly loved ones. Respite service includes both home and personal services¹⁴.

Elderly care profession is suitable to students of social sciences, social work education. Remarkable share of elderly suffer from life style disease like diabetes, hypertension, heart and diabetes, hypertension, heart and lung diseases. They need professional support/care for their doing daily activities. Elderly care is therefore an upcoming profession for providing professional assistance for everyday living of elderly and requires more attention, dedication and commitment in addition to technical knowledge and experience relating to elderly.

Elderly care givers has more job potential in metropolitan cities. Earlier, the elderly care used to be the responsibility of their family. This practice is still intact in the rural areas. In urban areas, there has been a large number of elderly living without the familiar support care. About 70 per cent of elderly live with one or multiple ailments require their Activities of Daily Living (ADL). These conditions have created a vast opportunity for short term and long term care givers, semi-qualified nursing assistants, day time carers and 24 X 7 carers etc. Keeping in view of these upcoming requirements, National Institute of Social Defence (NISD), the nodal ministry is engaged in training the eligible person on elderly/ Geriatric Care to generate pool of geriatric Care givers in order to assist the elderly in need of these cares. NISC has been training eligible persons on elderly/ Geriatric Care and also through its Regional Resources Training Centres (RRTCs) located at Delhi, Kolkata, Mumbai, Imphal, Bangalore, Hyderabad and Coimbatore. The Old Age Care Division of NISD is a unique institution which offers customized courses on the following stream with a view to cater to the emerging needs.

- Three Month Certificate Course on Geriatric Care is offered for those with minimum 10 pass qualification. People particularly married women, widows, persons who have inclination to work for elderly, transgender may also apply for the course and work as individual Home

¹⁴ Available at: <https://vibrantgujarat.com/writereaddata/images/pdf/project-profiles/home-care-facility-for-senior-citizens.pdf> (visited on 23rd Nov. 2016).

Care giver/taker of elderly. They have job opportunities in old age homes and may be absorbed in the hospitals as helpers and NGOs working in the field of elderly care.

- Six Month Certificate Course on Geriatric Care is offered for those with +2 qualification. It has job potentials in old age homes/day care centres including palliative care units to work as geriatric care givers/palliative helper and supervisors in related NGOs. One Year Post Graduate Diploma in Integrated Geriatric Care (PGDIGC) is offered for those who completed under graduation. PGDIGC will help them work in old age homes as geriatric care managers and offer specialized services such as conducting to identify needs, problems and eligibility for assistances, research on ageing, screening, arranging and monitoring in-home help and other services. It also provides for reviewing financial, legal or medical issues, offering referrals to specialists to avoid future problems and to conserve assets, providing crisis intervention, making sure things are going well and alerting families of problems. Assisting with moving their clients to or from a retirement complex, assisted living facility, rehabilitation facility or nursing home, providing client and family education and advocacy and offering counseling and support. These professionals also have opportunities in leading NGOs working on elderly issues as programme assistants/coordinators¹⁵.

VIII. Additional Policies and Programmes for Welfare of Elderly in West Bengal

The Government of West Bengal runs two exclusive housing schemes for BPL category – Gitanjali and Amar Thikana. In the rural areas more than 34,000 houses have been constructed under these two schemes. As per the administrative records, there are more than 4,000 elderly beneficiaries¹⁶.

A scheme called “Project Pranam” a 24-hour helpline is initiated in 2009 to provide safety, security and medical assistances to senior citizens living alone through a venture of Kolkata Police and NGO “The Bengal”. It is a unique support mechanism wherein psychological and physical security supports are provided to the elderly in the city of Kolkata. Due to loneliness and health problems most of the lonely elderly couples or those who stay alone suffer from depression, which further pushes them to suicides at times. So to help them fight mental depression, this scheme arrange various camps, get together and sports activities. Ambulance facilities are provided during

¹⁵ Employment News, 16-22 January, 2016.

¹⁶ National Institute of Rural Development & Panchayati Raj, Hyderabad 2016, Policy for the Aged: Opportunities and Challenges, pp. 23.

the time of emergencies. Hospitalisation is ensured for the caller when needed¹⁷.

The Government of West Bengal arranged provisions for pensions for the needy and elderly folk artistes through a project “Lokprasar Prkalpo”. There are many folk artistes in West Bengal, who used to perform in various programmes with reputation and attracted attention of the audiences. Most of them are now unable to perform because of their old age.

They do not have definite source of income and there is nobody to look after them. The Government helps them and provides social security for them through “Lokprasar Prkalpo”¹⁸.

e-pension is an initiative of The Directorate of Pension, Provident Fund and Group Insurance, Finance Department, Government of West Bengal to provide e-governance to the pensioners of recognized Non Government aided educational institutions, Panchayat, Municipality etc . The said online facility would bring in transparency and cut down delay in receiving pensions. At present, it takes around two or three years to receive a Pension Payment Order due to the manual nature of verification by different authorities. With the new e-pension portal, the whole process will be online and paperless, bringing total transparency and cutting down on time. Gratuity would be paid immediately on the day of retirement and pension will be released in the bank account on the due date, that is, immediately after completion of first month after retirement. The new initiative is a part of the state government’s e-governance activity, which it undertook in 2012¹⁹.

There are total thirty-two old age homes for the poor and destitute run by the NGOs in the different Districts of the state. There is one Government run old age home where political sufferers as well as destitute old-aged males and females are accommodated²⁰.

Old Age Pension (Indira Gandhi National Old Age Pension) granted to a person who is 65 years or more of age and is destitute in the sense of having little or no regular means of subsistence from his/her own sources of income or through support from the family members or other sources. The amount of Old Age Pension was increased from Rs 100/- to Rs 400/- per month during the financial year²¹.

¹⁷ Kolkata Police News, Vol. 1 (8), June 2009

¹⁸ Available at: <http://www.westbengal.gov.in> (visited on 03rd Oct. 2017).

¹⁹ The Directorate of Pension, Provident Fund and Group Insurance, Finance Dept., Government of West Bengal

²⁰ Available at: <http://www.wpsc.gov.in/aboutus.htm> (visited on 12th Sep, 2017).

²¹ Available at: <http://www.wbprd.gov.in/HtmlPage/SSECURITY.aspx> (visited on 3rd Oct. 2017).

The retirement ages of college and university full-time regular teachers, principals including librarians and graduate laboratory instructors in the West Bengal have been increased to 62 years from existing 60 years²².

The Department of Women Development and Social Welfare works towards the protection, equity and inclusion of populations that have been historically oppressed, neglected or excluded from development because of their gender, age, disability or situation. This includes women, senior citizens and other marginalized populations such as persons with disabilities, transgender persons, homeless persons and persons with drug / alcohol addiction. Social security is extended through Old Age Pensions, Widow Pensions and Disability Pensions. Apart from pensions, senior citizens in need can avail of shelter at various government homes. Under the West Bengal Maintenance and Welfare of Parents and Senior Citizens Rules, 2008, runs tribunals that hear cases of senior citizens who face harassment and eviction by their families²³.

Career mela for senior citizens in Kolkata: To help senior citizens to step into life second career options after retirement, the West Bengal Housing Infrastructure Development Corporation (WBHIDCO) is holding a senior citizen mela to help them train and choose career options. In the mela workshops are being held to help senior citizens learn on cooking and home delivery, IT and desktop publishing, handicraft and run a boutique, beautification course to run a beauty parlour. Seminars are being held on legal matters, developing writing skills and net publishing, home tourism, financial management etc²⁴.

Free medical service for senior citizens in Kolkata: Bidhannagar Municipality has taken a decisive step to show the rest of country how to take care of the elderly. It has decided to take a unique initiative to provide free emergency medical services to the elderly who live alone in Salt Lake²⁵.

IX. Conclusion and Suggestions

In this paper, Indian Constitutional provisions for elderly, legal measures including the Hindu Adoption and Maintenance Act, 1956 and the Muslim Law, different policies and programmes for welfare of elderly in India and pension systems in India have been highlighted in brief. This paper has also highlighted, in brief, the job opportunities for services related to elderly in homes, in old age homes, hospitals etc. It has also mentioned different professional courses relating to the services of the elderly.

²² Notification No. 561-F(P), Dt. 31.01.2017, Govt. of West Bengal, Finance [Audit] Department

²³ Available at: <http://wb.gov.in/portal/web/guest/women-and-social-welfare>

²⁴ The Hindu, March 2, 2014

²⁵ The Times of India, June 16, 2014

Additional policies and programmes for welfare of elderly undertaken by Government of West Bengal have also been pointed out here.

From our personal interactions with elderly and their family members relating awareness of constitutional provisions for elderly including legal measures, different policies and programmes for welfare of elderly in India and West Bengal etc, it may be inferred that majority of the elderly and their family members, even those of urban areas do not have any knowledge or have very less knowledge.

Elder Law is not friendly to elderly in India. The murder of a 94-year old and his 64-year old daughter-in-law in Patel Nagar in Delhi on the eve of World Elder Abuse Awareness Day has reinforced the opinion that India is not a country friendly for the elderly. Even though there are laws that protect them, these are so badly publicized and implemented that a large section of those suffering cruelty at the hands of friends or strangers do not get any reprieve. But even today, say lawyers, awareness about the law and its provisions remain abysmally low; because of this, elderly continue to suffer mental and physical abuse from their children or kin. World Health Organisation's (WHO) report on 'Missing Voices' stated six key categories of elder abuse, neglect and abandonment, disrespect and ageist attitudes, psychological, emotional and verbal abuse and legal and financial abuse. Delhi High Court lawyer Ajay Verma said, "There is no awareness among elders. That is also because rules/law is not highly prompted. Only literate people may be aware but what about the illiterate? They suffer badly. The government must advertise widely, hold special camps and come up with an online case filling system". Though lawyers have been kept out of the maintenance tribunals, many argue it has its disadvantages because the process remains technical. Once a complaint is filed, notices are issued, statements recorded and evidence gathered – all these require legal assistances²⁶. Although in a metropolitan city like Kolkata, a scheme called "Project Pranam" a 24-hour helpline was initiated in 2009 to provide safety, security and medical assistances to senior citizens living alone, but the details of the scheme is not well advertised among the concerned people and the number of incidents of murders of elderly has been increasing day by day. One case of murder out of several murder and cheating cases in Kolkata may be mentioned as follows: one person Bappa was arrested on July 17, 2015 in connection with the double murder of an elderly couple (Pran Govinda Das and Renuka Das) living in an apartment in north Kolkata. Couple's daughter was working in USA. Bappa's wife Purnima was a maidservant in Das's family and was looking upon the said elderly couple. Bappa was also close to the Das's family and used to help the elderly couple in household stuff. In fact, Mr. and Mrs. Das helped Bappa with money, yet

²⁶ The Times of India, June 15, 2015

Bappa murdered them²⁷. In Such unfortunate incidents have been numerous and happening both in rural and urban areas in India, particularly in metropolitan cities and surrounding areas. Elderly living alone or elderly couples living alone are the prime targets of criminals and opportunity seekers. Rules/laws for the elderly must be made friendly to elderly; above all, society must be liberal and sympathetic towards the elderly who have rendered their services throughout their life to the society and reached at their last phase of life.

²⁷ Press Trust of India, Kolkata July 17, 2015

Appendix – B
Questionnaires

Appendix-B.1

Questionnaire for Household Survey
Part-A: Household to study their role in the care of the
Elderly Persons

Questionnaire for Household Survey

Part-A: Household to study their role in the care of the Elderly Persons

For the Research Project on

Population Ageing in West Bengal with Special Reference to Social Security

I. General Information

- (a) District: (b) Rural-1/Urban-2:
(c) Name of Ward/Village:
(d) Type (Ward-0/Less ST-1/More ST-2/Less Muslim-3/More Muslim-4):
- Sr. No.:
- Name of the head of the household:
- Religion: Hinduism-1/Muslim-2/Christian-3/Sikh-4/Others(Specify)-5
- Mother tongue: Bengali-1/Hindi-2/Nepali-3/Others(Specify)-4
- Caste: General-1/OBC-2/Schedule Caste-3/Schedule Tribe-4

II. Household Information

- Household details:

No.	Relationship	Sex	Age (years as on lbd)	Marital Status	Education	Occupation		Average Monthly Income (Rs)	
						Past*	Present	Past*	Present
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

*For elderly only

Relationship (Self-0/Spouse-1/ Son, Daughter, Daughter-in-law, Nephew, Niece-2/ Parent, Parent-in-law-3/ Grandchildren-4/ Sibling, Cousin, Brother-in-law, Sister-in-law-5/Grandparent, Grandparent-in-law-6/ Others(Specify)-7)

Sex (Male-1/Female-0)

Marital Status (Married-1/Widow or Widower-2/Divorce-3/Separated-4/Unmarried-5)

Education (Illiterate-0/Primary Education-1/ Secondary or Higher Secondary-2/ Graduate- 3 /Post Graduate-4/Doctarate-5/Others(Specify)-6)

Occupation (Does Not Arise-0/Unemployed-1/Self Employed-2/Cultivation-3/ Labourer-4/Service-5/Manufacturing or Repairing-6/Business-7/House Wife-8/Pensioner-9/Priest-10/Begger-11/Others(Specify)-12)

Average Monthly Income (Nil -0/ ≥ 1 &<1,000 -1/ $\geq 1,000$ &<5,000 -2/
 $\geq 5,000$ &<10,000 -3/ $\geq 10,000$ &<15,000 -4/ $\geq 15,000$ &<20,000 -5/
&<30,000 -6/ $\geq 30,000$ &<40,000 -7/ $\geq 40,000$ &<50,000 -8/ $\geq 50,000$ -9)

8. Type of household: Nuclear-1/Joint-2/Live Alone-3/Other(Specify)-4
APL-1/BPL-0

9. Number of dependents members staying in this house:

10. Material used in the house:

(a) Roof: Concrete-1/Tiles-2/Thatched-3/Tin-4/Asbestor-5/Wood-6/Others(Specify)-7

(b) Floor: Cement-1/Tiled-2/Marble-3/Mud-4/Wood-5/Others(Specify)-6

(c) Wall: Brick-1/Mud-2/Bamboo-3/Wood-4/Tin-5/Others(Specify)-6

11. Numbers of rooms:

12. Facilities available:

(a) Drinking water: Community well-1/ Own well-2 /Street tap-3/Pipe-4/
Streams-5/Ponds-6/Tube well-7/Tube well of other house-8/ Others (Specify)-9

(b) Bathroom inside the house: Yes-1/No-0

If 'Yes' in Q12 (b), mention its type: Attached with room-1/Shared-2

(c) Latrine inside the house: Yes-1/No-0

(d) Cooking fuel: Firewood-1/ Kerosene-2/ Solar/Gas plant-3/ Cooking gas-4/
Others(Specify)-5

(e) Lighting fuel: Electricity-1/Kerosene-2/Solar/Gas plant-3/Others(Specify)-4

13. House ownership type: Owned-1/Rented-2/Leased-3/Others(Specify)-4

14. Do you or any member of this household own a house anywhere else?
Yes-1/No-0

15. Does any member of the household own land? Yes-1/No-0

If yes, mention the number of members and total area (in Kathas):

16. How many of your family members are residing outside your house because of
occupation/studies etc. :

17. Monthly income (Rs) of the household (from all sources):

(<1,000 -1/ $\geq 1,000$ &<5,000 -2/ $\geq 5,000$ &<10,000 -3/ $\geq 10,000$ &<15,000 -4/ $\geq 15,000$
&<20,000 -5/ $\geq 20,000$ &<30,000 -6/ $\geq 30,000$ &<40,000 -7/ $\geq 40,000$
&<50,000-8/ $\geq 50,000$ &<1 lack -9/ ≥ 1 lack -10)

III. Elderly Specific Information of Household

18. (a) Number of generations of elderly persons currently living in the household:

(b) Number of elders in the household:

(c) Number of generations living in the household:

19. Number of dependent elderly persons in the households:

20. Number of working elderly persons in the household:

21. Monthly income (Rs) (including pension, if any) of the elderly persons of the household:

(Nil -0/ ≥ 1 &<1,000 -1/ $\geq 1,000$ &<5,000 -2/ $\geq 5,000$ &<10,000 -3/
 $\geq 10,000$ &<15,000 -4/ $\geq 15,000$ &<20,000 -5/ $\geq 20,000$ &<30,000 -6/
 $\geq 30,000$ &<40,000 -7/ $\geq 40,000$ &<50,000-8/ $\geq 50,000$ -9)

22. Number of elderly persons in the household having sound mental and physical health and economic condition:

27. Do you seek permission/consult elderly persons of your household prior to performing any job? Always-3/Sometimes-2/Seldom-1/Never-0/Does not arise-4

28. (a) Are you and your family members including elderly persons aware of different international, national declarations, policies, schemes and programmes for the welfare of elderly persons? Yes-1/No-0

(b) If yes, do the elderly members of your household try to avail the schemes and the benefits of the programmes? Yes-1/No-0/Does not arise-9

29. Do your family members accompany the elderly members of your household to party, hotel and cultural programmes? Yes-1/No-0/Does not arise-9

Appendix-B.2

Questionnaire for Household Survey
Part-B: Elderly Persons staying at Household and related details

Questionnaire for Household Survey

Part-B: Elderly Persons staying at Household and related details

For the Research Project on

Population Ageing in West Bengal with Special Reference to Social Security

I. General Information

0. (a) District: (b)Rural-1/Urban-2:
(c) Name of Ward/Village:
(d) Type (Ward-0/Less ST-1/More ST-2/Less Muslum-3/More Muslum-4):
2. Sr. No. of household: Sl. No. in the household schedule:
3. Name of the elderly person:
4. How many sons and daughters do you have?

	Male	Female
Total number born		
Total number alive		
Number living in this house		
Number living elsewhere		

5. Details of living sons and daughters

No.	Sex	Age(years as on lbd)	Marital Status	Education	Occupation	Place of stay	Average monthly income (Rs)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Sex (Male-1/Female-0)

Marital Status (Married-1/Widow or Widower-2/Divorce-3/Separated-4/Unmarried-5)

Education (Illiterate-0/Primary Education-1/Secondary or Higher Secondary-2/ Graduate-3 /Post Graduate-4/Doctarate-5/Others(Specify)-6)

Occupation (Does Not Arise-0/Unemployed-1/Self Employed-2/Cultivation-3/Labourer-4/Service-5/Manufacturing or Repairing-6/Business-7/House Wife-8/Pensionner-9/Priest-10/Begger-11/Others(Specify)-12)

Place of stay (Same house & same kitchen-1/Same house but different kitchen-2/

Other than same house & joint family-3/Other than same house & not joint family-4/
Married daughter, living in own house-5)

Average Monthly Income (Nil -0/ ≥ 1 & $< 1,000$ -1/ $\geq 1,000$ & $< 5,000$ -2/

≥5,000 & <10,000 -3/ ≥10,000 & <15,000 -4/ ≥15,000 & <20,000 -5/ ≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/ ≥40,000 & <50,000-8/ ≥50,000 -9)

6. Duration of your average present daily working hours (household work & working for earning):

II. Living Arrangement

7. What is your living arrangement?
Alone -1/ With spouse only -2/ With spouse, sons, daughters -3/
With spouse & other members -4/ With sons & their children-5/With other relation & non-relation -6/Others (Specify)-7
8. Where do you stay in the house?
Separate room (with separate bath room)-1/Separate room (with common bath room)-2/Store room (unhygienic room)-3/ Corridor-4/Not in a fixed place-5/Others (Specify)-6
9. Do you get sufficient food and clothes, you need? Yes-1/No-0
10. Do you get sufficient medicines and health care whenever you need? Yes-1/No-0
11. What are the location residences of children/grandchildren/siblings?
Within same building-1/Within same village-town-2/Other places-3/
Not applicable-4

III. Economic Condition

12. (a) Do you have any immovable property such as
- | | |
|-------------|------------|
| (a) House | Yes-1/No-0 |
| (b) Shop | Yes-1/No-0 |
| (c) Land | Yes-1/No-0 |
| (d) Orchard | Yes-1/No-0 |
| (e) Others | Yes-1/No-0 |
- (b) If having at least one of Q11 (a), do you have any idea how much is it worth off (Rs)?
(<25,000 -1/ ≥25,000 & <50,000 -2/ ≥50,000 & <1 lack-3/ ≥1 lack & <2 lacks -4/
≥2 lacks & <5 lacks-5/≥5 lacks & <10 lacks-6/≥10 lacks & <20 lacks-7/
≥20 lacks & <50 lacks-8/≥50 lacks-9)
13. (a) Do you have personal jewellery? Yes-1/No-0
- (b) If yes, what would be it approximate value (Rs)?
(<25,000 -1/ ≥25,000 & <50,000 -2/ ≥50,000 & <1 lack-3/ ≥1 lack & <2 lacks -4/
≥2 lacks & <5 lacks-5/≥5 lacks & <10 lacks-6/≥10 lacks & <20 lacks-7/
≥20 lacks & <50 lacks-8/≥50 lacks-9)
14. (a) Do you have bank account(s)/investments/ insurances(other than health insurances)? Yes-1/No-0
- (b) If yes, what would be the present balance total (Rs)?

(<5,000 -1/ ≥5,000 & <10,000 -2/ ≥10,000 & <20,000 -3/ ≥20,000 & <50,000 -4/
≥50,000 & <1 lack -5/ ≥1 lack & <2 lacks -6/ ≥2 lacks & <5 lacks -7/ ≥5
lacks & <10 lacks -8/ ≥ 10 lacks & <25 lacks -9/ ≥25 lacks -10)

14. (a) Do you have other personal assets like TV, motor cycle, car, computer etc?
Yes-1/No-0

(b) If yes, what would be the approximate total value (Rs)?
(<5,000 -1/ ≥5,000 & <10,000 -2/ ≥10,000 & <20,000 -3/ ≥20,000 & <50,000 -4/
≥50,000 & <1 lack -5/ ≥1 lack & <2 lacks -6/ ≥2 lacks & <5 lacks -7/ ≥5
lacks & <10 lacks -8/ ≥ 10 lacks & < 25 lacks -9/ ≥25 lacks -10)

15. (a) How many dependants do you have?

(b) If having at least one dependants, (i) what are the relations with them?
Spouse only-1/spouse & children-2/children-3/children & grandchildren-4/
Spouse, children, parent-5/Others(Specify)-6

(ii) How much do you need to spend monthly on an average for them (Rs)?
(<1,000 -1/ ≥1,000 & <5,000 -2/ ≥5,000 & <10,000 -3/ ≥10,000 & <15,000 -4/
≥15,000 & <20,000 -5/ ≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/
≥40,000 & <50,000 -8/ ≥50,000 -9)

16. (a) Are you dependant on someone(s)? Yes-1/No-0

(b) If yes, (i) how do you dependant? Partly-1/Fully-2, and
(ii) on whom? Spouse only-1/Spouse & children-2/Children-3/
Grandchildren-4/Siblings-5/Relatives-6/Others(Specify)-7

(iii) How much money on average he/she/they provide you monthly (Rs)?
(<1,000 -1/ ≥1,000 & <5,000 -2/ ≥5,000 & <10,000 -3/ ≥10,000 & <15,000 -4/
≥15,000 & <20,000 -5/ ≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/
≥40,000 & <50,000 -8/ ≥50,000 -9)

17. How much monthly expenditure on average do you incur (Rs)?

(<1,000 -1/ ≥1,000 & <5,000 -2/ ≥5,000 & <10,000 -3/ ≥10,000 & <15,000 -4/
≥15,000 & <20,000 -5/ ≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/
≥40,000 & <50,000 -8/ ≥50,000 -9)

18. (a) Do you contribute any of your own money for the household expenses?
Yes-1/No-0/Does not arise-2

(b) If yes, (i) how much (Rs) on an average monthly?
(<1,000-1/ ≥1,000 & <5,000 -2/ ≥5,000 & <10,000 -3/ ≥10,000 & <15,000 -4/
≥15,000 & <20,000 -5/ ≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/ ≥40,000
& <50,000 -8/ ≥50,000 -9)

(ii) Per Cent of total HH expenditure:

19. (a) Are you presently working? Yes-1/No-0
- (b) If yes, (i) what is your present occupation?
 Cultivation-1/ Own firm-2 /Teaching-3/ Executive-4/ Labourer-5/
 Business-6/ Transport-7/ Priest-8/Begger-9/Others(Specify)-10
- (ii) Working organization type: Organized sector-1/Unorganized sector-2
- (c) What is your present monthly income (including pension, if any) (Rs)?
 (<1,000 -1/ ≥1,000 & <5,000 -2/ ≥5,000 & <10,000-3/ ≥10,000 & <15,000 -4/
 ≥15,000 & <20,000 -5/≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/
 ≥40,000 & <50,000-8/ ≥50,000 -9)
- (d) Mention amount of monthly pension (if any) separately: Rs
20. (a) Are you an income tax payer? Yes-1/No-0
- (b) If yes, how much annual tax on average you have to pay (Rs)?
 (<1,000 -1/ ≥1,000 & <5,000 -2/≥5,000 & <10,000-3/≥10,000 & <15,000 -4/
 ≥15,000 & <20,000 -5/≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/ ≥40,000
 & <50,000-8/ ≥50,000 -9)
21. (a) Do your son(s),daughter(s),brother, relatives etc(other than household members) provide you some monthly for your expenses? Yes-1/No-0/Does not arise-2
- (b) If yes, how much on an average (Rs)? (<1,000-1/≥1,000 & <5,000 -2/≥5,000 & <10,000-3/ ≥10,000 & <15,000-4/ ≥15,000 & <20,000 -5/ ≥20,000 & <30,000 -6/ ≥30,000 & <40,000 -7/ ≥40,000 & <50,000-8/ ≥50,000 -9)

IV. Economic Security

22. Can you easily spend money for buying clothes, food, medicines etc for you or toys for your grandchildren? Yes-1/No-0
23. If you wish to visit some of your relatives or to go on pilgrimage can you arrange traveling and other expenses? Yes-1/No-0/Does not arise-2
24. If ever the need arise, do you think you can make separate living arrangements (house, flats etc) for yourself? Yes-1/No-0/Does not arise-2
25. (a) Do you have any debt? Yes-1/No-0
 (b) If yes, are you in a position to clear debt? Yes-1/No-0
26. General feeling
- | | |
|----------------------------------|------------|
| a. Feeling lonely | Yes-1/No-0 |
| b. Health is not good | Yes-1/No-0 |
| c. Children don't stay with you | Yes-1/No-0 |
| d. Children don't visit as often | Yes-1/No-0 |
| e. Nobody to help | Yes-1/No-0 |
| f. Nobody to prepare food | Yes-1/No-0 |
| g. Afraid of thieves | Yes-1/No-0 |

- h. Not able to move around Yes-1/No-0
i. Nobody to help when you are sick Yes-1/No-0

27. (a) Are you a beneficiary covered under National Old Age Pension Scheme?
Yes-1/No-0

(b) If yes, how much you receive monthly from that scheme? Rs

V. Involvement in Household and Social Activities

28. (a) Are you head of the household? Yes-1/No-0

(b) Were you ever head of the household? Yes-1/No-0

29. Do you involve in day-to-day purchase and other activities of household items?
Yes-1/No-0/Does not arise-2

30. Do you involve in big purchase like land, house, car etc of the household?
Yes-1/No-0/Does not arise-2

31. Do you involve in decision-making activities of the family? Yes-1/No-0/Does not
arise-2

32. Are you allowed to make interactions with your grandchildren? Yes-1/No-0/Does
not arise-2

33. Do you involve yourself in sending to and receiving from your grandchildren
school? Yes-1/No-0/Does not arise-2

34. Do you involve yourself in study of your grandchildren?
Yes-1/No-0/Does not arise-2

35. Do feel neglected/ isolated in the household and not allowed to make interactions
with friends and relatives? Yes-1/No-0/Does not arise-2

36. Do you have any conflict with some family members particularly with your
daughter-in-laws? Yes-1/No-0/Does not arise-2

37. Do you have freedom in the household? Yes-1/No-0/Does not arise-2

38. Do you practice any religious activities at home? Yes-1/No-0

39. If yes in Q38, do you face any problem from your family members?
Yes-1/No-0/Does not arise-2

40. Do you visit temple/mosque/church? Always-1/Sometimes-2/Seldom-3/Never-4

41. If you are married and your spouse is alive at present, what type of adjustment do
you have now with your spouse compared to the same when you were young?
Same-1/Better-2/Worse-3/Can't say-4

42. Do you face any problem if your old mates come to your house and exchange your
views among you? Yes-1/No-0/Does not arise-2

43. When do you become ill, do other family members take care of you? Yes-1/No-0/Does not arise-2
44. Are you associated with the different activities including cultural of your locality? Yes-1/No-0
45. Are you associated with any religious organizations/associations? Yes-1/No-0
46. Are you associated with any political activities? Yes-1/No-0

VI. General Opinion

47. Do you think that the youngsters of the present generation have less respect for the elderly? Yes-2/No-0/Same-1
48. It is viewed that children are the main support for the parents at old age. Do you agree with view? Yes-1/No-0
49. In your opinion, who should take care of the old parents? Sons-1/Daughters-2/Both-3/Themselves-4
50. Are you aware of old age home? Yes-1/No-0
51. Are you aware of RML? Yes-1/No-0
52. In your opinion, which is the best place/option for persons to live in their old age? With sons-1/With daughters-2/Alone-3/In OAH/RML-4
53. (a) If situation arises, are you willing to join in an OAH? Yes-1/No-0
(b) If yes, will you be able to pay? Yes-2/No-0/Partially-1
54. Having your own house, if situation arises, will you go for RML? Yes-1/No-0
55. Is old age a curse?
No-0/Depends on physical, mental, social, financial situation-1/Yes-2/
No opinion-3
56. Is the government doing enough to take care of the elderly in India?
Yes-2/No-1/ No opinion-0
57. Is the present retirement age reasonable? Yes-2/No-1/No opinion-0
58. Should pension be compulsory for all employees as well as pension schemes devised for self-employed persons? Yes-2/ No-1/No opinion-0
59. Do you feel any discrimination of the elderly members of the family with other members? Yes-1/No-0
60. Do you feel any discrimination of the female elderly members with the male elderly members of the family? Yes-1/No-0
61. Do you like to remain in workforce? Yes-1/No-0

62. If yes in Q61, (a) reason for like to remain in workforce: Earning money-1/
Engagement-2/Others (Specify)-3
(b) Preference type of organization: Organized sector-1/Unorganized sector-2

63. If no in Q61, reason for not liking to remain in workforce: Health not permit-
1/Family not permit-2/Like to take rest-3/Others (Specify)-4

VII. Health Security, Condition and Problem

64. How is your health in general? Very healthy-1/Fairly all right-2/Unhealthy-3

65. (a) Do you have any any health insurance policy (s)? Yes-1/No-0

- (b) If yes, how much monthly health insurance premium you pay? Rs

66. Present health problems:

(i) None	Yes-1/No-0
(ii) Whooping cough	Yes-1/No-0
(iii) Ulcer	Yes-1/No-0
(iv) Blindness/Low visual	Yes-1/No-0
(v) Cataract	Yes-1/No-0
(vi) Dental	Yes-1/No-0
(vii) Heart	Yes-1/No-0
(viii) Cancer	Yes-1/No-0
(ix) Mobility	Yes-1/No-0
(x) Arthritis/Joint pain	Yes-1/No-0
(xi) Weakness of muscles	Yes-1/No-0
(xii) Back pain	Yes-1/No-0
(xiii) Anemia/Weakness	Yes-1/No-0
(xiv) Loss of appetite	Yes-1/No-0
(xv) Sleeplessness	Yes-1/No-0
(xvi) Lapse in memory	Yes-1/No-0
(xvii) Mental retardation/Mental illness/Depression	Yes-1/No-0
(xviii) Speech difficulty	Yes-1/No-0
(xix) Partial paralysis/Full paralysis	Yes-1/No-0
(xx) Respiratory/Asthma	Yes-1/No-0
(xxi) Urinary	Yes-1/No-0
(xxii) Prostate	Yes-1/No-0
(xxiii) Hernia	Yes-1/No-0
(xxiv) Hypertension	Yes-1/No-0
(xxv) Blood pressure	Yes-1/No-0
(xxvi) Gastric/acidity	Yes-1/No-0
(xxvii) Constipation	Yes-1/No-0
(xxviii) Skin disease	Yes-1/No-0
(xxix) (High/Low)/Diabetes	Yes-1/No-0
(xxx) Hearing	Yes-1/No-0
(xxxii) Leg pain/Lame	Yes-1/No-0
(xxxii) Others (Specify)	Yes-1/No-0

67. Do you use the following?

- a. Spectacles Yes-1/No-0
- b. Hearing aid Yes-1/No-0
- c. Walking stick Yes-1/No-0
- d. Dentures Yes-1/No-0
- e. Wheelchair Yes-1/No-0
- f. Footwear Yes-1/No-0

68. Who financed you for the aids?

	Self -1	Children-2	Voluntary agents-3	Does not arise -4
1. Spectacles				
2. Hearing aid				
3. Walking stick				
4. Wheelchair				
5. Dentures				
6. Footwear				

69. How much physically mobile are you?

Mobile-1/Confined to bed-2/Confined to house-3/Others(Specify)-4

70. Do you require other person's assistance for the following?

	No need of help-1	Need help-2	Cannot do even with help-3
1. Get out of bed			
2. Go to toilet			
3. Bathing			
4. Walk inside house			
5. Walk for some distance			
6. Take food			
7. Dressing			

71. (a) If you get sick, will you consult a doctor? Yes-1/No-0

(b) If yes, what type of doctor? Government-1/Private-2

72. Were you sick at any time during the last

- a. One week? Yes-1/No-0
- b. One month? Yes-1/No-0
- c. One year? Yes-1/No-0

73. (a) During last one year, were you hospitalized? Yes-1/No-0

(b) If yes, duration of stay in hospital/nursing home (in days): Cost: Rs

74. Whom do you consult when you become ill?

None-0/Quack doctor-1/General physician-2/Specialized doctor-3/Others(Specify)-4

75. When you are required for hospitalization where do you go or where are you sent?

Nowhere-0/Local govt. health centre (free bed)-1/Govt. hospital (free bed)-2/

Govt. hospital (paying bed)-3/Nursing home-4/Others(Specify)-5

76. Do you have any of the following habits?

None-0/Smoking-1/Drinking alcohol-2/Racing-3/Gambling-4/Others(Specify)-5

VIII. Life Satisfaction

77. Do you feel depressed sometimes? Yes-1/No-0

78. If yes in Q74, put \checkmark mark for appropriate reason(s) for depression from the following:

- a. ill health
- b. poor economic condition
- c. immobility
- d. detached from family/society or lose of family member(s) and/or relative(s)
- e. lose of dignity and belongingness etc.

79. Do you think that whatever you expected from your life you have been able to get it? Everything of it-3/Much of it-2/Something of it-1/Less of it/Nothing of it-0

80. How do you rate your life satisfaction?

	Agree-3	Uncertain-2	Disagree-1
1. As you grow older, things seem to be better than before			
2. Old age is the most pleasant time of your life			
3. You are just as happy as when you were younger			
4. Most of the things you do are boring and monotonous			
5. You expect some pleasant and interesting things to happen to you in coming years			
6. You feel old and somewhat tired			
7. As you look back on your life, you feel satisfied and happy			
8. You have made plans for things you will be doing in a month or year			
9. Compared to other people, you get disappointments too often			
10. In spite of what some people say, the lot of the average man is getting worse, not better			
11. You may get scope to do your unfinished works			

Appendix- C
Panchayat Samity

Appendix- C.1

Block (Panchayat Samity) wise per cent of Muslims to total population
in Malda district for census 2001 and 2011

**BLOCK (PANCHAYAT SAMITY) WISE PER CENT OF MUSLIMS TO TOTAL
POPULATION IN MALDA DISTRICT FOR CENSUS 2001 AND 2011**

Sl. No.	Name of block	2001	2011
1	Bamangola	8.9	8.9
2	Malda (Old)	26.4	28.6
3	Ratua - II	76.7	78.7
4	Harishchandrapur - I	57.8	59.4
5	Chanchal - I	69.5	71.2
6	Chanchal - II	70.1	71.2
7	Habibpur	1.2	1.3
8	Harishchandrapur - II	72.6	73.7
9	Kaliachak - II	67.5	66.0
10	Manikchak	42.7	43.9
11	Ratua - I	65.3	66.9
12	English Bazar	49.5	51.5
13	Kaliachak - III	47.7	50.7
14	Gazole	22.3	23.6
15	Kaliachak - I	88.4	89.3
Malda (District)		49.7	51.3

Source: Censuses of India, 2001 and 2011

Appendix- C.2

Block (Panchayat Samity) wise per cent of ST to total population in
Jalpaiguri district for census 2001 and 2011

**BLOCK (PANCHAYAT SAMITY) WISE PER CENT OF ST TO TOTAL
POPULATION IN JALPAIGURI DISTRICT FOR CENSUS 2001 AND 2011**

Sl. No.	Name of block	2001	2011
1	Alipurduar - I	19.3	16.9
2	Alipurduar – II	19.9	18.4
3	Kumargram	24.4	30.0
4	Kalchini	40.4	40.3
5	Madarihat - Birpara	34.5	38.8
6	Falakata	17.3	15.9
7	Dhupguri	21.3	21.0
8	Nagrakata	46.5	49.2
9	Matali	46.0	44.1
10	Malbazar	26.7	34.5
11	Maynaguri	1.1	1.3
12	Jalpaiguri Sadar	2.0	6.1
13	Rajganj	5.0	4.1
Jalpaiguri (District)		18.9	18.9

Source: Censuses of India, 2001 and 2011

Appendix – D

Data on Programmes for Welfare of Elderly

Appendix – D.1

Indira Gandhi National Old Age Pension Scheme

Beneficiaries of National Old Age Pension Schemes (NOAPS)

From 2002-03 to 2014-15

Indira Gandhi National Old Age Pension Scheme (IGNOAPS) or National Old Age Pension Scheme (NOAPS) is a social sector scheme and forms part of the National Social Assistance Programme (NSAP) which came into effect from 15th August, 1995. This scheme provides social assistance for the old age persons.

The number of beneficiaries reported under NOAPS/IGNOAPS was 6697509 in 2002-03. The number of beneficiaries reported under NOAPS/IGNOAPS was 6624000 in 2003-04. It decreased by -73509 as compared to 2002-03. In percentage terms, the decrease was -1.1% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 8079386 in 2004-05. It increased by 1455386 as compared to 2003-04. In percentage terms, the growth was 21.97% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 8002598 in 2005-06. It decreased by -76788 as compared to 2004-05. In percentage terms, the decrease was -0.95% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 8708837 in 2006-07. It increased by 706239 as compared to 2005-06. In percentage terms, the growth was 8.83% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 11514026 in 2007-08. It increased by 2805189 as compared to 2006-07. In percentage terms, the growth was 32.21% during the period. The maximum annual growth in percentage terms in number of beneficiaries reported under NOAPS/IGNOAPS of 32.21% was recorded during the year 2007-08.

The number of beneficiaries reported under NOAPS/IGNOAPS was 15020640 in 2008-09. It increased by 3506614 as compared to 2007-08. In percentage terms, the growth was 30.46% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 16333578 in 2009-10. It increased by 1312938 as compared to 2008-09. In percentage terms, the growth was 8.74% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 17059756 in 2010-11. It increased by 726178 as compared to 2009-10. In percentage terms, the growth was 4.45% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 21384404 in 2011-12. It increased by 4324648 as compared to 2010-11. In percentage terms, the growth was 25.35% during the period. The maximum annual growth in number of beneficiaries reported under NOAPS/IGNOAPS of 4324648 was recorded during the year 2011-12.

The number of beneficiaries reported under NOAPS/IGNOAPS was 22712043 in 2012-13. It increased by 1327639 as compared to 2011-12. In percentage terms, the growth was 6.21% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 22331089 in 2013-14. It decreased by -380954 as compared to 2012-13. In percentage terms, the decrease was -1.68% during the period. The number of beneficiaries reported under NOAPS/IGNOAPS was 22981127 in 2014-15. It increased by 650038 as compared to 2013-14. In percentage terms, the growth was 2.91% during the period.

Source: Ministry of Rural Development and also published in statistical year book 2016 by Ministry of Statistics & Programme Implementation (MOSPI).

Appendix – D.2

National Family Benefit

NATIONAL FAMILY BENEFIT SCHEME (NFBS)

The NFBS provides a lump sum family benefit of Rs. 10000 to the bereaved household in case of death of the primary bread winner irrespective of the cause of death. This scheme is applicable to all the eligible persons in the age group of 18-64. Attempt had been made to evaluate the efficiency of the scheme with the help of the field survey.

(a) Socio-economic conditions of the beneficiaries :

Out of 32 beneficiaries, only 2(6.25%) were male and 30(93.75%) were female. Only 12(37.5%) were literate and 20(62.5%) were illiterate. Out of this 12 literate beneficiaries, 11(91.66%) had the qualification of primary and above level but below matriculation level and only, a single (8.33%) beneficiary had the qualification of matriculation and above but below graduation level but not a single one could reach upto graduation level. Out of 32 beneficiaries only 2(6.25%) were small farmers, not a single one was a marginal farmer. 5(25.625%) hailed from North Bihar were agricultural labourers, and other 5(125.625%) hailed from Jharkhand were non-agricultural casual labourers, 14(43.75%) were non-agricultural self-employed, there was no one in the artisan group and only 6(18.75%) were others including housewives. It was clear that the non-agricultural self-employed had taken the maximum benefit from the scheme.

50.0% beneficiaries had the family size of 1-5 members, other 50.0% had the size of 6-11 members, but not a single one had the size of 12 or more 7(21.875%) beneficiaries belonged to scheduled caste, only 1(3.125%) belonged to scheduled tribe group, 18(56.25%) belonged to OBCs and 6(18.75%) belonged to others group including minority. Neither a single beneficiary was freed bonded labour, nor a assignee of surplus land. But 100% belonged to others category. Out of 32 beneficiaries, only a single (3.125%) beneficiary who hails only from Jharkhand had income below Rs. 6401, 3(9.375%) had in between Rs. 6401-11000, 20(62.5%) in between Rs. 11001-16000, 7(21.875%) in between Rs. 16001-21000, and only 1(3.125%) hailing from North Bihar had income above poverty line. This beneficiary managed to get the benefit of the scheme with his manipulating skill including payment of speed money.

(b) Economic Structure and Viability of the scheme :

Out of 32 beneficiaries, 30(93.75%) beneficiaries were the wives of the deceased and only 2(6.25) were sons of deceased.

28(87.5%) beneficiaries reported that they had paid the speed money to the block authority whereas 4(12.5%) of North Bihar reported that they had not paid it. No beneficiary was there who paid speed money below Rs. 101 to the concerned block authority. 3(10.71%) paid in between Rs. 101-200, 8(28.57%) paid in between Rs. 201-300, 4(14.28%) paid in between Rs. 301-400, and 13(46.42%) in between Rs. 401-500 but not a single one was there to pay above Rs. 500. 10 (31.25%) beneficiaries reported that they had paid the speed money to the concerned district authority. Only a single

beneficiary hailing from North Bihar paid the speed money amount below Rs. 251 to the concerned district authority other of the same region had paid in between Rs. 251-500, 4 (12.5%) had paid in between Rs. 501-1000, other 4 (12.5%) had paid in between Rs. 1001-2000, while no one had paid above Rs. 2001.

Out of 32 beneficiaries, 20 (100.0%) beneficiaries of Jharkhand region paid speed money only at block level, 8 beneficiaries of North Bihar and Central Bihar paid speed money at both the places i.e., block level and district level but 2 beneficiaries of North Bihar paid speed money only at district level. Only 2 beneficiaries of North Bihar had not paid any amount of speed money either at block level or at district level. 9 beneficiaries paid directly to the office, 18 beneficiaries to the middle men and 3 to others including bank employees.

(c) General Observation and recommendations :

Out of 32 beneficiaries, 10(31.25%) reported that they had utilised the amount of consumption

expenditure, 8(25.0%) had utilised to undertake productive activity, 11(34.375%) had utilised to repay the loan, and remaining 3(9.375%) hailing from only Central Bihar had utilised on other purposes.

Beneficiaries observations :

Beneficiaries of the scheme had pointed out the following observations :

1. Procedural delay should be avoided by simplification of the process.
2. In case of death outside the local area, beneficiaries had to face a lot of problems in obtaining death certificate. This created a lot of problems specifically in case of migrant labour. Alternative should be evolved to save the beneficiaries from harassment on the score.

Investigators observations and recommendations :

On the basis of cross-survey the Investigators confirmed that

- (i) Amount of speed money in the scheme was high as the Government pays Rs. 10000/- at a time.
- (ii) The authorities created a number of obstacles in case of no payment or less payment of speed money.

Suggestions :

1. The payment should be made in a time-bound framework and accountability should be fixed for any delay in way to extract maximum speed money from the beneficiaries.
2. Amount should be deposited in a fixed account for not less than a year.

Appendix – D.3

Old Age Pension for the General Public

Privileges and Benefits

Old age pension for the general public

National Old Age Pension (NOAP) Scheme

Under National Old Age Pension Scheme, Central Assistance is available on fulfillment of the following criteria

- The age of the applicant (male or female) should be 65 years or more.
- The applicant must be a destitute in the sense that he/she has no regular means of subsistence from his/her own source of income or through financial support from family members or other sources.

The amount of old age pension is Rs 75 per month. This scheme is implemented in the State and Union Territories through Panchayats and Municipalities. Both Panchayats and Municipalities are encouraged to involve voluntary agencies as much as possible in benefiting the destitute elderly for whom this scheme is intended. (Ministry of Rural Areas and Employment, NSAP Guidelines for State Governments)

Old age and widow pension in Maharashtra

Under the Sanjay Gandhi Niradhar Anudan Yojana, an individual (female 60 years or above and males 65 years or above) can get Rs 100 per month if he/she has no source of income. If a woman is a widow and has one or more children below 18 years then she is eligible for a pension of Rs 250 per month. Under Indira Gandhi Bhumihiin Vrudh Sheth-Majdoor Sahayay Yojana, an individual (female 60 years or above and male 65 years or above) gets Rs 100 per month. The beneficiary of this scheme must be a destitute and from a rural area.

Widow pension in Karnataka

The pension amount is Rs 75 per month. Age is no bar

Widow Pension in West Bengal

The pension amount is Rs 150 per month for widows below poverty line. There is no age bar.

Widow Pension in Kerala

Widow pension is Rs 110 per month. The person must be a destitute and her income per year must be below Rs 12,000. Age is no bar.

Old Age Pension Amounts		
Name of the State	Current amount of pension (Rs per month)	Minimum age of eligibility (in years)
Andhra Pradesh	75	65
Arunachal Pradesh	150	60
Assam	60	65 (males) 60 (females)
Bihar	100	60
Gujarat	200-275	60-65 +
Haryana	100	60
Himachal Pradesh	150	60
Jammu & Kashmir	125	60
Karnataka	100	65
Kerala	110	65
Madhya Pradesh	150	60 (males) 50 (females)
Maharashtra	100	65 (males) 60 (females)
Mizoram	100	65 (males) 60 (females)
Orissa	100	65
Punjab	200	65 (males) 60 (females)
Rajasthan	200-300	58 (males) 55 (females)
Tamil Nadu	150	60
Uttar Pradesh	125	60
West Bengal	300	60
West Bengal	300	60
Chandigarh	200	65 (males) 60 (females)
Delhi	200	60

Annapurna

A new scheme called Annapurna has been recently initiated by the Government of India under which free food grains up to 10 kg per month will be provided to such destitute older persons who are otherwise eligible for old age pension under the National Old Age Pension Scheme but are not receiving it and whose sons are not residing with them. However, it is yet to be implemented. (Ministry of Rural Development with the assistance of Ministry of Food and Civil Supplies)

Source: <http://www.disabilityindia.org/oldage.cfm#p&fp>

Appendix – D.4

Courses Offered by the Old Age Care Division of National
Institute of Social Defence (NISD)

Professional Courses offered by the Old Age Care Division of National Institute of Social Defence (NISD)

Three Month Certificate Course on Geriatric Care is offered for those with minimum 10 pass qualification. People particularly married women, widows, persons who have inclination to work for elderly, transgender may also apply for the course and work as individual Home Care giver/taker of elderly. They have job opportunities in old age homes and may be absorbed in the hospitals as helpers and NGOs working in the field of elderly care.

Six Month Certificate Course on Geriatric Care is offered for those with +2 qualification. It has job potentials in old age homes/day care centres including palliative care units to work as geriatric care givers/palliative helper and supervisors in related NGOs.

One Year Post Graduate Diploma in Integrated Geriatric Care (PGDIGC) is offered for those who completed under graduation. PGDIGC will help them work in old age homes as geriatric care managers and offer specialized services such as conducting to identify needs, problems and eligibility for assistances, research on ageing, screening, arranging and monitoring in-home help and other services. It also provides for reviewing financial, legal or medical issues, offering referrals to specialists to avoid future problems and to conserve assets, providing crisis intervention, making sure things are going well and alerting families of problems. Assisting with moving their clients to or from a retirement complex, assisted living facility, rehabilitation facility or nursing home, providing client and family education and advocacy and offering counseling and support. These professionals also have opportunities in leading NGOs working on elderly issues as programme assistants/ coordinators (Employment News 16 – 22 January 2016).

Appendix – D.5

Lokprasar Prakaipo

Lokprasar Prakaalpo

A new flagship project namely 'Lokprasar Prakaalpo' has been introduced by the Department of Information & Cultural Affairs with the inspiration of Hon'ble Chief Minister Mamata Banerjee. The main objectives of the project are - (I) to bestow dignity on folk artistes by issuing them identity cards, (2) to uphold the traditional folk forms of Bengal, (3) to revive nearly-extinct folk-forms of art and culture and (4) to uplift the socio economic conditions of artists associated with folk culture.

The Department of Information and Cultural Affairs has been implementing, the following programmes under 'Lokprasar Prakaalpo':

- (a) issuing identity card to each folk-artiste;
- (b) arranging for monthly pension for veteran and distressed folk-artistes;
- (c) granting of retainer fee to artistes; and
- (d) arranging for the minimum income by engaging them in the public campaign programme on development projects.

(a) Issuing of Identity Cards

One of many objectives that the 'Lokprasar Prakaalpo' is to bestow dignity on every folk-artistes. Unfortunately folk-artistes hardly get their due respect, and they remain ignored in the society. The Government has taken initiative to confer upon them their due honour through Lokprasar Prakaalpo. So far, 84,720 artistes have been provided with identity cards across the state.

(b) Provisions for pensions for the needy and elderly folk artistes

There are many folk artistes in Bengal, who used to perform in various programmes with reputation and attracted attention of the audiences. Most of them are now unable to perform because of their old age. They don't have definite source of income and there is nobody to look after them. The government helps them and provides social security for them through Lokprasar Prakaalpo.

The folk artistes who are above 60 years of age are getting pension under Lokprasar Prakaalpo. At present, in West Bengal about 8,596 artistes have been receiving Rs. 1000 per month.

(c) Retainer fee for the artistes

The enlisted folk artistes under the age of 60 years in Lokprasar Prakaalpo, who are engaged in publicity campaign in different departments, have been receiving Rs. 1000 per

month as retainer fee. Till now approximately 76,000 folk artistes have been receiving the retainer fee.

(d) Utilisation of services of the Folk Artistes for the publicity of Development Projects

Government is in the mission of publicising its Flagship Programme through Lokprasar Prakaalpo among the people. For instance, the Folk Artistes are being utilized for disseminating information regarding the schemes like Kannyasree, Yubasree, Sikshasree etc. and programmes like Nirmal Bangla, Sarbo Sikhsa Avijan etc. to the common people. Initiative has been taken for arranging 4/5 nos. of programme for each artistes. A yearlong campaign is organised through mobile Tableau Vans where folk artists are engaged by rotation in each district and sub division.

Following table shows the breakup of enlisted folk artists in districts:

Sl.No	Name of the Districts	Total Enlisted F.A.s
1	Cooch Behar	1,792
2	Alipurduar	1,613
3	Jalpaiguri	2,338
4	Darjeeling	3,051
5	Uttar Dinajpur	10,139
6	Dakshin Dinajpur	2,722
7	Malda	1,335
8	Murshidabad	4,945
9	Nadia	3,759
10	North 24 Parganas	6,306
11	South 24 Parganas	4,090
12	Howrah	1,276
13	Hooghly	5,108
14	Purba Medinipur	7,319
15	Paschim Medinipur	7,632
16	Purulia	4,961
17	Bankura	5,993
18	Burdwan	4,828
19	Birbhum	5,513
Total		84,720

Initiative has been taken to organise workshops in each district with the assistance of the researchers on folk culture for upgrading the traditional folk forms for presentation to new generations in a more attractive way.

Lokprasar Prakaalpo has already achieved a great success through its implementation. The so called neglected rural folk artistes of Bengal are taking part in this scheme with great enthusiasm.

Last updated on: Tue, 02 May 2017

Information Source: Department of Information & Cultural Affairs (I&CA), Government of West Bengal.