SUMMARY

The present work is a study on the bio-social aspects of ageing among the Sonowal Kachari elderly of Lakhimpur district, Assam. Studies on ageing has been going on for sometimes now in different parts of the globe throwing light on the high degree of variability in age related problems. In India, studies on ageing, so far has been prerogative of demographers, sociologist and psychologist and their main focus in the emerging problem of population ageing and the means to deal with the same gerontological studies are rather comparatively of recent origin in Anthropology especially in North-East part of India.

The increasing elderly people can impact on various socio economic aspects as this segment of population is associated with multiple physiological and psychological vulnerability. This segment of population faces numerous problems because of the fundamental changes taking place in its social structure due to a complex web of interlocking factors like Westernization, industrialization, urbanization, mobility of
young generation and employment of women outside the home and technological progress.

It is evident that more than seventy percent of our population resides in rural areas, practicing agriculture as their main occupation and having joint family in their society. Now-a-days in rural areas the traditional way of living has undergone considerable changes. This change has an impact on social and individual life. In such an altering situation, the older people are suffering largely. Naturally, the dependency, both physical and financial tends to grow with age and to this the new trend of multifunctional change in the society adding more severe situation to the elderly people. Therefore, a thorough study in the rural context is also essential to understand the ageing problems in this region (NE India). Hence, the present study has been undertaken to assess the bio-social aspects of ageing in a rural context among the Sonowal Kacharis of Lakhimpur District, Assam.

Sonowal Kacharis are Assamese speaking Hinduised tribal people. They speak Assamese because they have been surrounded by Assamese caste population which plays a key role in the assimilation process. They are traditionally agriculturists, having joint family in their society. Now-a-days, their traditional way of living has been changed to a considerable extent. Increasing level of education for both the sexes as compared to the other tribes of Assam leads to their high occupational mobility leading to breaking down of joint family structure.

People who are fifty years and above are categorized as 'elderly' in the present study. Though people above 60 years of age are considered as old, in the present study people of fifty years and above are also included in order to understand the magnitude
of change from the age 50-59 and thereafter. It is a cross-sectional study consisting of both male and female respondents.

In order to commence the study three structured schedules are prepared. The first is the demographic survey schedule to collect the basic information of population size, population structure and population characteristics. The second schedule is designed to obtain information relating to economic status, health status, activity level, self-assessment of health, social problems of the elderly, availability of care provider, etc. The third is a PGI battery for assessment of mental efficiency in the elderly. This battery consists of tests to assess memory, alertness and depression among the elderly.

The sample data has been divided into five economic classes according to Modified BG Prasad’s Classification for October 2013 (Updated as per CPI October 2013). The data of the study has been analyzed using the programme ‘Statistical Package for Social Science’.

**DEMOGRAPHIC PROFILE OF THE SONOWAL KACHARIS**

To get the basic information of the Sonowal Kachari population size, population structure and population characteristics some demographic data has been collected from five different villages i.e., Kadam Kachari, Sensuwa Pathar, Bharti Sonowal Gaon, Purani Kachari Gaon and No.2 Marisa Pathar. These villages are situated at different distances from Lakhimpur town, Dhakuakahana and Bihpuria town.

Out of the total population of the studied Sonowal Kacharis, 51.28% are males and 48.72% are females. The sex ratio of the Sonowal Kachari is 945, which is the lower than the overall sex ratio (978) of the ST population of Assam (census, 2001). From the age-sex distribution of the people it is observed that from the age group 25-29
years the number of population is found to gradually decrease both at higher and lower age groups which is indicative of the fact that fertility has started declining in population since last about 30 years. The total literacy rate of the population is 88.62% which is comparatively higher than the state level Sonowal Kachari literacy rate i.e., 81%. It is observed that the number of widow is higher than the widower. Among the Sonowal Kacharis agriculture is the predominant type of occupation. In non-worker category the number of females is higher than the males. The predominant type of family is nuclear family among the studied population. Different factors may impact on creating nuclear family; some of them are like education, service, engagement of women in work, migration to urban area, etc.

**SOCIO-DEMOGRAPHIC PROFILE OF THE ELDERLY PEOPLE**

In the present study the number of elderly females is higher than males. The sample is categorized into 50-59, 60-69, 70-79 and 80+ years age groups, the highest concentration of males (40.31%) and females (43.38%) is found in the age category of 60-69 years. Majority of the elderly males and females are found in the income group III and IV.

The number of widow is higher than widower in each age group. Irrespective of income group the number of widows is much higher than men. The highest number of males and females with spouse is found in the 50-59 years age category.

As an agricultural community, majority of the elderly in the present study are found to live in joint families. But in the youngest age group, nuclear family is the predominant type. The elderly living alone is found to be very rare in this studied
population. Only one male and one female elderly live alone and four elderly each of males and females live only with their spouse.

Among the elderly, a gender variation is observed in the education level. Illiteracy among females is much higher than males irrespective of age and income. It has been noticed that illiteracy increases with the advancing age. Illiteracy is highest in the lowest income group (V).

The study reveals that agriculture is the predominant occupation among the Sonowal Kacharis of Lakhimpur district. But occupational mobility is observed among the youngest age group. It has been found that the number of non-worker female is higher than the males in all age and income categories. Out of the total sample, 51.16% men and 11.76% women have their own source of income. Compared to the elderly males higher number of elderly females are found to be economically supported by their children. In both males and females, dependency increases with age. Irrespective of all age and income groups female dependency is higher than males.

**BIOLOGICAL ASPECTS**

**ASSESSMENT OF AGE RELATED CHANGES WITH REGARD TO ANTHROPOMETRIC MEASUREMENTS**

To understand the age related changes in anthropometric variables some anthropometric measurements like weight, stature, mid upper arm circumference, chest circumference, waist circumference and hip circumference have been recorded. The results of the present study showed a marked reduction in all anthropometric variables
except in height from the lowest age group (50-59 years) to the immediately next higher age group (60-69 years). Though the declining trend in the values of all parameters continues throughout with the increase of age, the decline is not so sharp in the later age groups. As a result, significant differences are observed between Group I and other groups in all parameters in both the sexes except in height of males. In case of females, the elderly of Group II also differ significantly from Group III in all parameters except in height. Since a drastic reduction in the values of all the parameters are observed from the age group 50-59 years to the immediate next age group, 60 years of age may perhaps be considered as a threshold point of old age. The present study shows that the rate of decrease in different anthropometric variables in women is higher than in men.

PREVALENCE OF DISEASES

In the present study, the elderly Sonowal Kacharis are found to be suffered from different types of morbidity and some cases show coexistence of more than one form of disease. Elderly females report slightly higher morbidity than the males, 55% of males and 61% of females have some form ailments. The number of elderly who suffered either from one disease or from more than one disease at a time increases with advancing age. The most prevalent combination of diseases of elderly males and females under present study is digestive and musculo-skeletal disorders. The most prevalent disease among the elderly males is digestive disorder (21.07%) and among the females it is musculo-skeletal (29.41%). This disorder is more prevalent in the older age groups. The occurrence of musculo-skeletal disorder is much higher in women than in men, due to some biological as well socio-cultural factors.
When one disease at a time is considered, it is found that gastritis is the most common form of disorder followed by musculo-skeletal disorder and high blood pressure in men. On the other hand, musculo-skeletal disorder is highly prevalent among the women followed by gastritis and high blood pressure. It is observed that the gastritis is one disease which the elderly suffer from most in the age group 70 years and above than the early age group. Musculo-skeletal disorder among female elderly is also distinctly higher in the 70+ age group than the earlier age groups. Cough and asthma are also the two diseases which the elderly suffer more at late age.

When blood pressure is measured it is found that the mean systolic and diastolic pressure in all age categories is higher in men than in women, except in diastolic pressure in 50-59 years age group. Elderly women from the lowest income group show the highest mean systolic and diastolic pressure. Among elderly men, the highest systolic pressure is found in the income group I whereas, the highest diastolic pressure is found in income group II.

The prevalence of high blood pressure and diabetes are found to be higher in the youngest age category and higher income group (income group I) in both males and females. The life style of the younger generation has undergone certain changes due to impact various factors like, higher education, occupational mobility. These changes might be responsible for higher incidence of high blood pressure and diabetes among the elderly of the younger age group.

The self rated appetite shows variation according to age and sex. Higher number of females considered their appetite as ‘bad’ as compared to males. The number
of elderly males and females who have assessed their appetite as “bad” increased with age.

The age of onset of different diseases tend to show gender variation. The average age at onset of various diseases in both the sexes is found during 60-69 years of age except in high blood pressure among females. The mean age of onset of diabetes is 52.69 years in case of males and 49.50 years in case of females. It is observed that females are affected much earlier than males in all disorders.

Different types of impairment are found to associate with the ageing process. Majority of the elderly Sonowal Kacharis are suffered from vision problem which is followed by locomotor and hearing problems. Prevalence of all forms of impairment is found to be higher in females than in males. All type of impairments show an association with the advancing age. The age of onset shows that the elderly females suffer from different forms of impairments at early age as compared to elderly males.

For treatment of different forms of diseases or ailments majority of the Sonowal Kacharis prefer allopathic treatment but, they also prefer their traditional medicine because of various reasons. Some also practice magico-religious practices for treatment of some of the diseases. It is found that usually children take the responsibility to look after their old parents. But sometime they are to seek help from close relatives in case their children are incapable of bearing the burden of expensive treatment. As compared to elderly females, elderly males are more financially independent for treatment.

NUTRITIONAL STATUS

In the present study the nutritional status of the elderly has been assessed with the help of nutritional anthropometry. It is revealed that prevalence of CED malnutrition
is higher in both sexes. In both sexes undernutrition increased with the increase of age. Undernourished and over nourished women are found to be higher than men. In the present study, obesity is totally absent in males. In females it is found only in the younger age group (50-59 years). Irrespective of all income groups, undernourished women is higher than men. This gender variation in nutritional status is associated with socio cultural factors along with economic condition.

For the purpose of comparison the nutritional grading is grouped into three categories. They are below normal, normal and above normal. The number of elderly having below normal BMI is higher in women than in men. The number of elderly males and females with below normal BMI increased from the highest income group (I) to the lowest income group (V). The normal BMI and above normal BMI is found to be higher among men than women.

Elderly people are susceptible to different diseases and the forms and patterns of diseases are multiple. The nutritional status and diseases show that high blood pressure is more among the people belonging to above normal category, while gastritis is found to be higher in the below normal category. Irrespective of all nutritional grades musculoskeletal problems are observed to be more elevated among the women, except in the above normal category. There is a gradual decline in the incidence of the diseases with increase in BMI values except high blood pressure in both men and women.

SELF ASSESSMENT OF HEALTH CONDITION

Irrespective of age and income higher number elderly females consider their health as bad as compared to elderly males. But in both sexes, with the increase of age,
the self rated health status as ‘good’ decreased. In the present study self-assessment of health status does not show any clear association with income.

Majority of the elderly males and females with different disorders considered their health as ‘bad’. When leading chronic disorder is examined with self-assessment it is found that the perception of health varies between males and females according to their prevailing diseases. Irrespective of all types of chronic disorders, females considered their health as bad.

While examining the subjective health rating against prevailing diseases it is found that in both genders, majority of the elderly who have suffered from different forms of ailments or diseases have considered their health as ‘bad’. The elderly males and females, who have more than one disease, have rated their health condition as ‘bad’. But compared to elderly women, higher number of elderly men who have multiple disorders consider their health as “good”.

When self-assessment of health with leading chronic disorders is examined it is found that the perception of health varies between males and females according to their prevailing diseases. Females are found to consider their health as “bad” more than males in all types of chronic diseases.

When self-assessed health status is examined against their nutritional grading, it has been found that in case of males the “good” and “very good” response increases from below normal to above normal nutritional grading. On the other hand, the higher number of females belonging to normal categories and above normal categories, consider their health as ‘bad’. It is generally said that women have a tendency to evaluate themselves as sick more often than men.
FUNCTIONAL ABILITY IN ACTIVITIES OF DAILY LIVING

The present study showed that almost equal proportion of males and females require assistance in personal care activities. Elderly males and females belonging to the 50-59 years age category do not require any assistance in personal care activities. But in both sexes, dependence for personal care activities increased with the advancement of age. The study has revealed that women needed more assistance than men in performing outdoor as well as indoor activities. The number of elderly males and females who require assistance in IADL (outdoor) is greater than other categories. The need for assistance for both IADL (indoor) and IADL (outdoor) increases with age. Females started being dependent on others at early age as compared to males. No clear association is observed between functional ability and income in both the sexes.

There is an association between functional ability in daily living activities and diseases. Among the elderly males and females, those with no reported disease exhibited better physical ability. But, without any reported disease 9.30% of elderly men and 16.18% of elderly women are found requiring assistance in outdoor IADL, whereas, 2.32% of males and 2.94% of females required assistance in outdoor IADL. Elderly males with respiratory disorder alone required assistance only in outdoor IADL, while females required assistance in both indoor and outdoor IADL. When respiratory problem occurs with other disorders like cardiovascular, glandular and digestive, then required assistance in both the activities is apparent in both the sexes.

Requiring assistance with diseases increased with age in both the sexes. Some elderly without any reported disease required assistance in day to day activities. Requiring assistance without any diseases also increases with age in both sexes except
in indoor IADL in women. In both activities, irrespective of diseases, higher number of females requires more assistance than males. Elderly females belonging to below normal category are more incapable in their functional activity as compared to males.

PREVALENCE OF MENOPAUSAL PROBLEMS

The mean age at menopause is found to be 46.81 years among the studied Sonowal Kacahri women. Out of the total population 42.86% of elderly women faced different problems during that period and majority of them belong to the youngest age category. Increased body temperature is the most common difficulties faced by the women. Compared to the illiterate women, educated women are found to face more difficulties. Elderly women from higher income group found more difficulties than that of other income groups.

SOCIAL ASPECTS

The contemporary India has undergone certain changes in the social structure. The Indian society at present is transforming itself into industrial social order in which old people have experienced difficulties in maintaining their status with changing position and roles in old age. In the wake of weakening of specially the traditional family in India formerly providing the bulk of care, support and attributing due status and honour to the older family members, the elderly citizens have now been left to their own fate alone to make suitable social and cultural adjustment to the ageing process (Saxena, 2006).
ACTIVITY STATUS OF THE ELDERLY

An individual may not able to lead an active live due to impact of various factors. The incapacitation may increase with age and it may impact on their social and individual life. In the present study all the elderly males and 93.55% females belonging to the age group 50-59 years are fully active. With increase in age the activity status of both male and female elderly tend to move from fully active to partially active, idle and confined to bed/chair. In all age groups, the number of fully active males is higher than that of females. Elderly males remain more active compared to the elderly females in advanced years. It needs mention, however, that in the present study nobody in the 80+ age group is confined to bed.

CARE PROVIDER

Traditionally, in Indian society the younger members of the family look after their elder parents. In the present study children are found to be the main care provider to their elderly parents. In case of men, the spouse is the first choice of care provider followed by the unmarried daughters and daughters-in-law. Only one woman of the present study of the age group 50-59 years is reported to take care from the husband when she became sick. Some elderly males belonging to this age group also required care. Most of them reported that they needed only health care and that they were taken care of by their spouse and children. In the present study it is found that out of the total elderly, 40.31% males and 66.18% females do not require any help from others.

FREQUENCY OF CONTACT WITH COMMUNITY (FRIENDS/NEIGHBOUR)

It is observed that the elderly Sonowal Kacharis are able to enjoy active social life in their society. It helps them to get relief from many of their problems, both social
and psychological, through interaction with the neighbours and friends. In rural areas, the elderly can visit their neighbours without any prior appointment or without informing. Whenever they feel bored at home, they usually walk around the village and talk with their friends and relatives. The present study shows that majority of the males (50.39%) and 41.91% of females have regular contact with the villagers. With the increase of age, regularity of contact is reduced and occasional contact increased. Only 1.55% of males and 2.20% of females are incapable of making contact by themselves. But, they report that people of the village come and contact them almost regularly at their residence.

NATURE OF PROBLEM (SELF-IDENTIFIED)

The nature of problems faced by elderly are directly associated with age of an individual. In advancing age, the nature of problems undergoes changes. Physical problems become the main problems of old age. Other than their physical problem, the main problems prevalent among the elderly are that of family tension, loneliness and economic problems. 22.48% of the male and 13.97% of the female elderly reported that they do not have any problem. Some aged consider ageing as a normal phenomenon. Most of the aged belonging to the lowest age group reported that there is no problem at old age. Majority of elderly who reported not to have any problem at old age are found to be in the higher income category. But elderly belonging to lower income category are found to face multiple problems at their old age. Most of the Sonowal Kachari elderly use their leisure time in different activities. Such activities help them to overcome different age related problems.
EXPECTING THE NATURE OF SUPPORT FROM CHILDREN IN OLD AGE

Different kinds of problems are faced by the elderly at their old age. Therefore, they may need some sort of support or they may expect that sort of support from their offspring. Irrespective of age, sex and income, a good number of elderly (30.23% males and 39.70% females) in the present study are found to expect physical help from their children. The elderly expecting monetary, social and emotional helps are very few in number. These elderly are basically from the higher income group. In the present study, emotional help expected from the children is found to be the lowest as such help is usually received by the elderly.

A higher number of elderly belonging to the youngest age group do not expect any support from their children. But some elderly from the older age groups also do not expect any help from their children as they think that becoming old is a natural process and at that stage they do not require extra care. When children are not economically well off and not in a position to maintain their own family, it is difficult to expect financial help from their children.

FULFILMENT OF EXPECTATION

In the present study, majority of elderly people are found to be receiving care from the children. But majority of the elderly stated that the care received from their children is not up to their expectation. Elderly of high age groups are found to be more satisfied with their children in terms of their level of expectations, as compared to younger as group. The elderly from the lower income groups are more dissatisfied with their children.
IN INVOLVEMENT IN DECISION MAKING

It is found that elderly males are consulted little more than the elderly females in decision making process irrespective of their age and income. But the participation of the Sonowal Kacharis elderly females in decision making is quite encouraging. It is also evident that the advice of the elderly are sought in decision making by their children even at the oldest age group. It is also observed that children seek advice more in matters relating to agriculture and religious ceremonies than in other matters.

In the present study, 34.61% of males and 31.43% of females are availing old age pension. But majority of the beneficiaries are not satisfied with this scheme since the amount is too meagre. Irregular payment is another reason of their dissatisfaction. Some of them have bitter experience, like being asked to bribe the middle men, to get this amount.

PSYCHOLOGICAL ASPECT

The memory scores show a variation according to age, sex and income group. Memory score is found to decline with the increase of age. In all age categories the mean memory score among the elderly is higher in men than in women. It has also been found that mean memory score increases with the increase of educational level in both the sexes.

While examining the memory score with income group it is observed that the average score gradually increases from the lowest to the highest income group in both the sexes except in case of males of the lowest income group where the score level is slightly higher than their immediate next higher income group.
As in case of memory score, the same trend of gender and age variation is observed in alertness and perception and motion equity tests. Here also no clear association between alertness and perception motion equity score with income could be observed.

According to the geriatric scale, moderate and severe form of depression is found prevailing both among elderly men and women. In men, both the moderate and severe form of depression is much higher than in females. These two types of depression are increasing with the increase of age, except 80+ years of age. Depression levels do not show any relation with income group in both men and women. In the present study, severe form of depression is found to be higher among educated men and women. However, about 56% males and 48% elderly females are found to be free from any kind of depression.

CONCLUSION

A drastic reduction in the value of all anthropometric variables except height in both the sexes from 50-59 years age group to the immediately next higher age group i.e., 60-69 years age group is observed. Though, the reduction in the values in all the measurements is throughout, the reduction from 60-69 years age group onwards is quite gradual. No assistance in personal care activities is required by the elderly of 50-59 years age group, whereas, a considerable number of elderly in the 60-69 years of age group require such assistance. 60 years of age, therefore, may perhaps be considered as a threshold point of old age.

The joint family system with agricultural economy is still prevailing to a large extent among the Sonowal Kacharis under present study. Such families do not throw the
aged to the mercy of society. Rather the elderly are well taken care of not only by the children but also by the other members of the family. The elderly are also found to participate in productive activities as much as they can. Under such a situation the elderly still enjoy a high status in the society and play a major role in decision making at least at the family level. Among the Sonowal Kacharis both the males and females equally participate in agricultural activities. Their experience in the agricultural and related ceremonial activities is always counted. Therefore, the advices of the male and female elderly are always sought by their children.

Loneliness is hardly encountered by the elderly in this studied population. Being traditionally an agricultural community, social contact continues till late age which helps the elderly to get relief from many of their problems. Strong kinship ties have also greatly contributed in this process.

A positive self-perception on health is evident among the elderly even among those of low income group. Their active engagement in work till late age and accepting the deteriorating health as a natural phenomenon in the ageing process might have helped them to have such a perception.

Traditional in-built support system for the elderly is still dominant in the studied population. With the change of the society, the ways the people see the world may also be changed. In such a situation there might also be change in the in-built mechanism for the protection of the aged. However, in a homogenous community like the Sonowal Kacharis of the present study, strong kinship ties and the traditional support system is unlikely to discontinue even under changed situation.