# Spatial and Temporal Variation of Old Age Group Population in India 

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#### Abstract

old age group includes population above 60 years of age. This age group is an economic burden upon the adult age group as it is to be provided with food, clothing and sufficient health care. Social science research on old age group population has been gaining much momentum since 1970's. The rapid growth of elderly population raises two main areas of concern for government policy makers firstly how to ensure adequate health care and secondly how to build adequate economic and social support for elderly population. In this paper an attempt has been made to understand the trend of young age group population at state level from 1881-2001. It reveals that according to 1881 census the proportion of the old age population ( 60 years and above) was ( 7.43 per cent) as a country as a whole. However the trend show that the proportion of old age population has continuously increased from 5.27 per cent in 1881 to 7.43 per cent in 2001 to the total population, except during the census 1891, 1901, 1931 and 1951 when the country experienced a slight decline in the percentage of old age population.


KeyWords: Young, Biologically, Non Productive, Burden

## I Introduction

Usually old age group includes population above 60 years of age. This age group is an economic burden upon the adult age group as it is to be provided with food, clothing and sufficient health care. Social science research on old age group population has been gaining much momentum since 1970's, reflecting the rapid growth of the elderly population, a wider recognition of their needs, and an escalation in public expenditures upon them for income maintenance, health services, domiciliary support and accommodation (Shyrock 1976). The rapid growth of elderly population raises two main areas of concern for government policy makers firstly how to ensure adequate health care and secondly how to build adequate economic and social support for elderly population. In developing countries, projections reveal that demographic ageing early in the next century will produce unprecedented demands upon national
economies and social support systems.
One notable feature of old age group population is that the proportion of females in old age group is larger than the proportion of males in old age groups. This was associated with higher male mortality rate than the females in old age group, and higher life expectancy experienced by females as compared to male population. Further women may experience greater continuity in their major roles as they enter old age compared with men who commonly experience discontinuity associated with their exist from paid work. Similarly older women may also be more valued member in household than nonworking old men because of the greater contribution in the domestic chores.

The proportion of old age group population of any area is largely governed by the factor of life expectancy at birth. However, there are some other factors also that contribute to the proportion of old age group population. These
may include birth rate, death rate and migration. It is birth rate that determines the proportion of population in different age groups (Chandna, 2006, p.200). That is why the developed countries of the world such as USA, Australia, Japan etc are characterized by low birth rate and displayed large proportion of old age group population. By comparison, the developing countries like India, Iran Pakistan which are still in the second stage of demographic transition, recorded low proportion of old age group population. Similarly, death rate also influences the proportion of old age group population. The improvement of survival rate among the old people and high life expectancy of population contribute to a larger proportion of persons in the old age group, as is the case with most of the developed countries. By contrast, short longevity of life results in the low proportion of old age group population as is the case with most of the developing countries. Migration is another factor, which affects the proportion of old age group population. The migration of retired personnel, from their working place situated in urban places to their native village where the migrants still have their landed property, after retirement, affects the proportion of old age group population in rural and urban areas. This type of migration generally occurs in most of the developing countries of the world.

## II Data and Methodology

In this research paper data for Old age group population ( 60 years and above) from 1881 to 1961 was acquired from the book written by S.B. Mukherjee. However, the trend of Young age group population from 1971 to 2001 is based on data taken from census of India. The data have been processed, tabulated by using percentage method and presented in the form of tables to analyse the trend of old age group population of India's population from 1881 to 2001 census.

## III Result and Discussion

For the country as a whole the proportion of old age population has continuously increased from 5.27 per cent in 1881 to 7.43 per cent in 2001 (Table 1) to the total population, except during the census 1891, 1901, 1931 and 1951 when the country experienced a slight decline in the percentage of old age population (Table 1), whereas, all other decades represent an increase in the proportion of old age group population. It is worth pointing out that the increase in the old age group population (60 and above) was fastest from 1951 census onward (Table 1). The striking feature that can be drawn from the growth of old age population was that, during the period (1881-2001) there was an increase in the percentage of old age group population by ( 40.98 per cent) and there was marginal increase ( 0.99 per cent) of adult age group during the period of 1881 to 2001.whereas the proportion of young (0-14 years) age group experienced a decline of 7.04 per cent during 1881 to 2001. The effect of fertility decline, mortality decline combined with survivorship improvement among the population to benefit the old age population that in turn was responsible for growth of the old age group population.
The proportion of old age group population has marginally increased from 5.27 per cent in 1881 to 5.39 per cent in 1921 census (Table 1). The increase of old age group population in these 40 years was insignificant. This can be attributed to widespread famines and the influenza epidemic in the beginning of 20 century and 1918 killed a million of person. However the life expectancy during the period of 1881 to 1921 was below 20 years. The high death rate and low life expectancy in India was responsible for little change in the proportion of old age group population.
During the next phase of 1921 to 1951 the old age group population also had shown a marginal increase in the proportion of old age group population. During this phase the old age group population increased from 5.39 per cent in 1921 to
5.51 per cent in 1951 census. The marginal increase in the proportion of old age group population was the product of increase in the life expectancy of total population from 20.15 years in 1921 to 32.07 years in 1951 census. Further the decline in the death rate from 47.2 per thousand persons to 22.8 per thousand persons and decline in infant mortality rate from 211 per thousand persons to 146 per thousand persons also contributed for increase in the proportion of old age group population
After 1951 all the census of India recorded an increase in the proportion of old age group population (Table 1). The increase in the
proportion of old population was from 5.51 per cent in 1951 to 7.43 per cent in 2001 census (Table 1). The improvement in life expectancy from 32 years in 195 Ito 61 years in 2001 because of improvement in medical facilities played an important role in the improvement of proportion of old age group population. However, the proportion of population in this age group was largely governed by death rate. The death rate of population in India is declines from 22.8 per thousand persons in 1951 to 9.8 per thousand persons which resulted in improvement of old age group population.

## TABLE 1

INDIA: Percentage of Old Age Group (60+ Years) Population (1881-2001)

| State/ Union Territory | 1881 | 1891 | 1901 | 1911 | 1921 | 1931 | 1941 | 1951 | 1961 | 1971 | 1981 | 1991 | 2001 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INDIA | 5.27 | 5.25 | 5.09 | 5.26 | 5.39 | 5.12 | 5.70 | 5.51 | 5.64 | 5.97 | 6.40 | 6.76 | 7.43 |
| Andhra Pradesh | 6.31 | 6.18 | 5.66 | 6.30 | 6.48 | 5.92 | 6.31 | 6.61 | 6.24 | 6.36 | 6.65 | 6.79 | 7.59 |
| Arunachal Pradesh | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.65 | 4.76 | 4.35 | 4.54 |
| Assam | 4.29 | 4.29 | 3.48 | 3.74 | 3.58 | 3.51 | 3.75 | 4.11 | 4.27 | 4.72 | NA | 5.33 | 5.85 |
| Bihar | 5.54 | 5.62 | 5.51 | 5.44 | 5.27 | 4.83 | 5.72 | 7.57 | 5.62 | 5.90 | 6.80 | 6.27 | 6.63 |
| Chhattisgarh | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7.22 |
| Goa | NA | NA | 6.89 | 7.32 | 7.15 | 6.87 | NA | 8.20 | 8.03 | 6.62 | 6.79 | 7.05 | 8.33 |
| Gujarat | 3.54 | 4.49 | 3.12 | 3.95 | 4.48 | 4.66 | 5.55 | 4.87 | 4.96 | 5.26 | 5.95 | 6.39 | 6.99 |
| Haryana | 5.19 | 2.50 | 5.05 | 4.89 | 5.37 | 4.91 | 5.35 | 6.14 | 5.61 | 5.79 | 6.34 | 7.70 | 7.49 |
| Himachal Pradesh | 5.79 | 3.10 | 6.38 | 6.85 | 7.47 | 6.69 | 7.57 | 7.70 | 7.11 | 7.16 | 7.50 | 8.12 | 9.01 |
| Jammu \& Kashmir | N | 5.88 | 5.49 | 5.93 | 5.80 | 4.91 | 5.74 | NA | 5.05 | 5.55 | 5.75 | NA | 6.66 |
| Jharkhand | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5.86 |
| Karnataka | 4.30 | 4.96 | 5.32 | 5.67 | 6.03 | 5.47 | 5.30 | 5.28 | 5.74 | 6.10 | 6.62 | 6.69 | 7.69 |
| Kerala | Na | 4.65 | 4.29 | 4.38 | 4.53 | 4.71 | 5.48 | 5.28 | 5.84 | 6.22 | 7.50 | 8.82 | 10.47 |
| Madhya Pradesh | 4.73 | 4.92 | 3.85 | 4.42 | 4.96 | 4.32 | 5.46 | 5.15 | 5.18 | 5.79 | 6.45 | 6.63 | 7.09 |
| Maharashtra | 5.25 | 5.48 | 4.79 | 5.42 | 5.79 | 5.00 | 5.89 | 5.32 | 5.28 | 5.72 | 6.38 | 6.98 | 8.73 |
| Manipur | N |  | 6.15 | 5.30 | 5.82 | 5.70 | 5.53 | 6.14 | 5.60 | 6.09 | 5.87 | 6.05 | 6.71 |
| Meghalaya | 5.18 | 5.15 | 4.16 | 5.08 | 4.54 | 4.65 | 4.73 | 4.22 | 4.39 | 4.63 | 4.43 | 4.44 | 4.56 |
| Mizoram | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.62 | 4.81 | 5.52 |
| Nagaland | NA | 3.55 | 4.65 | 6.33 | 9.41 | 7.68 | 8.49 | 7.35 | 6.80 | 6.68 | 5.94 | 5.28 | 4.54 |
| Orissa | 5.34 | 5.01 | 4.68 | 4.70 | 4.38 | 4.37 | 5.65 | 6.29 | 5.67 | 6.02 | 6.39 | 7.20 | 8.26 |
| Punjab | 5.59 | 3.13 | 6.38 | 6.09 | 7.09 | 6.84 | 7.76 | 7.88 | 7.06 | 7.49 | 7.80 | 7.84 | 9.00 |
| Rajasthan | N | 5.03 | 4.46 | 4.56 | 4.93 | 4.84 | 5.72 | 5.86 | 5.15 | 5.51 | 6.03 | 6.29 | 6.74 |
| Sikkim | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.32 | 4.39 | 4.55 | 5.36 |
| Tamil Nadu | 5.12 | 5.59 | 5.59 | 5.87 | 5.89 | 5.42 | 5.52 | 5.59 | 5.60 | 5.74 | 6.41 | 7.45 | 8.82 |
| Tripura | Na | NA | 3.94 | 3.87 | 3.86 | 3.79 | NA | 4.23 | 5.41 | 6.58 | 7.05 | 7.01 | 7.27 |
| Uttar Pradesh | 5.57 | 5.73 | 5.40 | 5.29 | 5.44 | 5.64 | 5.97 | 3.83 | 6.29 | 6.77 | 6.84 | 6.86 | 7.01 |
| Uttarakhand | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7.71 |
| West Bengal | 5.68 | 5.34 | 5.20 | 4.96 | 4.39 | 4.44 | 4.65 | 4.94 | 5.04 | 5.30 | 5.55 | 6.04 | 7.11 |
| Union Territory |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Andaman \& Nic. Islands | 3.89 | 4.22 | 5.34 | 5.80 | 4.32 | 3.44 | NA | 2.73 | 2.81 | 2.63 | 2.94 | 3.40 | 4.88 |
| Chandigarh | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.66 | 4.02 | 4.41 | 4.99 |
| Dadra \& Nagar Haveli | NA | NA | 3.77 | 4.16 | 4.35 | 3.02 | NA | 4.23 | 4.02 | 4.06 | 4.00 | 4.29 | 4.00 |
| Daman \& Diu | NA | NA | 6.89 | 7.32 | 7.15 | 6.87 |  | 8.20 | 8.03 | 6.62 | 6.79 | 6.24 | 5.08 |
| Delhi | 5.19 | 1.94 | 5.05 | 4.45 | 4.41 | 3.76 | 3.60 | 5.52 | 4.14 | 4.29 | 4.48 | 4.66 | 5.19 |
| Lakshadweep | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5.08 | 4.88 | 5.10 | 6.14 |
| Pondicherry | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6.34 | 6.71 | 7.23 | 8.31 |

Source: (i)The Age Distribution of Indian Population. S.B Mukherjee (1976), East West Center, U.S.A.
(ii) Census of India (1971 to 2001): Compact Disk brought out by Census Department, Social and Cultural Tables C Series 1, India, Registrar General, India.

- N.A. $=$ Data Not Available

According to 1881 census the proportion of the old age population ( 60 years and above) was ( 5.27 per cent) as a country as a whole (Table 1). Among the states and Union Territories there were 7 states viz. Andhra Pradesh ( 6.31 per cent), Himachal Pradesh ( 5.79 per cent), West Bengal ( 5.68 per cent), Punjab ( 5.59 per cent), Uttar Pradesh ( 5.57 per cent), Bihar ( 5.54 per cent) and Orissa (5.34 per cent) exhibited a high proportion of old age group population than the national average (Table 1). On the other hand the States and Union Territories where the proportion of old age group population was below than the national average were ranging from ( 3.89 per cent) in Andaman and Nicobar Island to ( 5.25 per cent) in Maharashtra (Table 1) . The two decades 18811891 and 1891-1901 experienced a normal decline of ( -0.4 per cent) and ( -3.0 per cent) (Table 2 ). The percentage of old age population during 1891 was the highest in Andhra Pradesh ( 6.18 per cent) followed by Jammu and Kashmir ( 5.88 per cent), Uttar Pradesh ( 5.73 per cent), Bihar ( 5.62 per cent), Tamil Nadu ( 5.59 per cent), and Maharashtra ( 5.48 per cent) and Assam (5.34 per cent) (Table 21). All the remaining states and Union Territories recorded a lowest percentage of old age population than the national average (i.e. 5.25 per cent) (Table 2). The rate of decrease in the proportion of old age group during 1891-1901 was highest in Gujarat ( -30.5 per cent) followed by Madhya Pradesh (-21.8 per cent) Meghalaya (-19.2 per cent) and Assam ( -18.8 per cent) (Table 2). There were 8 states and Union Territories that experienced an increase in the proportion of old age population (Table 2). Table 2 provides a glimpse of the prospect of the increase of 3.3 per cent of old age group population in 1911 and (2.5 per cent) in 1921 census. In 1911, except Punjab,

Haryana, Goa, Uttar Pradesh, Bihar, Manipur, West Bengal and Delhi all other states and Union Territories recorded an increase in the proportion of old age group population (Table 2). The rise was the highest in Gujarat ( 26.6 per cent) followed by Meghalaya ( 22.1 per cent), Maharashtra ( 13.2 per cent), Madhya Pradesh ( 12.2 per cent) and Andhra Pradesh (11.3 per cent) (Table 2). During 1921 census there was a decline in the proportion of old age group population ranging from ( -0.2 per cent) in Tripura to (11.5) percent in West Bengal (Table 2). Whereas out of 15 states only Tamil Nadu state has recorded an increase lower than the national average remaining all the states experienced a growth of old age population more than the national average (Table $2)$.

There was a decline of ( -5.1 per cent) in proportion of old age group population in 1931 (Table 2). this may be due to widespread epidemics and famine during 1921-1931 in the country. The decline in the proportion of old age group population was highest in Dadra and Nagar Haveli (30.6 per cent) followed by Andaman and Nicobar Island ( -20.4 per cent), Nagaland ( -18.4 per cent), Jammu and Kashmir ( -15.3 per cent) and Delhi (14.7 per cent) (Table 2). The states and Union Territories that experienced an increase in the proportion of old age population during 1931 were found in Gujarat and Kerala ( 4.0 per cent), Uttar Pradesh ( 3.7 per cent) Meghalaya ( 2.4 per cent) and West Bengal (1.1 per cent) (Table 2). In 1941 there was a growth of old age group population in the country as a whole by ( 11.3 per cent). Whereas the states like Delhi ( -4.3 per cent), Karnataka ( -3.1 per cent) and Manipur ( -3.0 per cent) recorded a decrease in the proportion of old age group population (Table 2). All the other states and Union Territories have shown an increase in the proportion of old age group population (Table 2).

## TABLE 2

INDIA: Decadal Change of Old Age Group (60 + Years) Population (in Percentage) (1881-2001)

| State/ Union Territory | 1881-91 | 1891-01 | 1901-11 | 1911-21 | 1921-31 | 1931-41 | 1941-51 | 1951-61 | 1961-71 | 1971-81 | 1981-91 | 1991-2001 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INDIA | -0.38 | -3.05 | 3.34 | 2.47 | -5.01 | 11.33 | -3.33 | 2.36 | 5.85 | 7.20 | 5.63 | 9.91 |
| Andhra Pradesh | -2.06 | -8.41 | 11.31 | 2.86 | -8.64 | 6.59 | 4.75 | -5.60 | 1.92 | 4.56 | 2.11 | 11.78 |
| Arunachal Pradesh | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | 2.37 | -8.61 | 4.37 |
| Assam | 0 | -18.88 | 7.47 | -4.28 | -1.96 | 6.84 | 9.6 | 3.89 | 10.54 | N.A. | N.A. | 9.76 |
| Bihar | 1.44 | -1.96 | -1.27 | -3.125 | -8.35 | 18.43 | 32.34 | -25.76 | 4.98 | 15.25 | -7.79 | 5.74 |
| Chhattisgarh | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| Goa | N.A. | N.A. | 6.24 | -2.32 | -3.92 | N.A. | N.A. | -2.07 | -17.56 | 2.57 | 3.83 | 18.16 |
| Gujarat | 26.84 | -30.51 | 26.60 | 13.42 | 4.02 | 19.10 | -12.25 | 1.85 | 6.05 | 13.12 | 7.39 | 9.39 |
| Haryana | -51.83 | 102 | -3.17 | 9.82 | -8.57 | 8.96 | 14.77 | -8.63 | 3.21 | 9.50 | 21.45 | -2.73 |
| Himachal Pradesh | -46.46 | 105.81 | 7.37 | 9.05 | -10.44 | 13.15 | 1.72 | -7.66 | 0.70 | 4.75 | 8.27 | 10.96 |
| Jammu \& Kashmir | N.A. | -6.63 | 8.01 | -2.19 | -15.34 | 16.90 | N.A. | N.A. | 9.90 | 3.60 | N.A. | N.A. |
| Jharkhand | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| Karnataka | 15.35 | 7.26 | 6.58 | 6.35 | -9.29 | -3.11 | -0.38 | 8.71 | 6.27 | 8.52 | 1.06 | 14.95 |
| Kerala | N.A. | -7.74 | 2.10 | 3.42 | 3.97 | 16.35 | -3.65 | 10.60 | 6.51 | 20.58 | 17.6 | 18.71 |
| Madhya Pradesh | 4.02 | -21.75 | 14.81 | 12.22 | -12.90 | 26.39 | -5.68 | 0.58 | 11.78 | 11.40 | 2.79 | 6.94 |
| Maharashtra | 4.38 | -12.59 | 13.15 | 6.83 | -13.64 | 17.8 | -9.68 | -0.75 | 8.33 | 11.54 | 9.40 | 25.07 |
| Manipur | N.A. | N.A. | -13.82 | 9.81 | -2.06 | -2.98 | 11.03 | -8.79 | 8.75 | -3.61 | 3.06 | 10.91 |
| Meghalaya | -0.58 | -19.22 | 22.12 | -10.63 | 2.42 | 1.72 | -10.78 | 4.03 | 5.47 | -4.32 | 0.23 | 2.70 |
| Mizoram | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | 4.11 | 14.76 |
| Nagaland | N.A. | 30.99 | 36.13 | 48.66 | -18.38 | 10.55 | -13.43 | -7.48 | -1.76 | -11.08 | -11.11 | -14.02 |
| Orissa | -6.18 | -6.59 | 0.43 | -6.81 | -0.23 | 29.29 | 11.33 | -9.86 | 6.17 | 6.15 | 12.68 | 14.72 |
| Punjab | -44.01 | 103.83 | -4.55 | 16.42 | -3.53 | 13.45 | 1.55 | -10.41 | 6.09 | 4.14 | 0.51 | 14.79 |
| Rajasthan | N.A. | -11.33 | 2.24 | 8.11 | -1.83 | 18.18 | 2.45 | -12.11 | 6.99 | 9.44 | 4.31 | 7.15 |
| Sikkim | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | 32.23 | 3.64 | 17.80 |
| Tamil Nadu | 9.18 | 0 | 5.01 | 0.34 | -7.98 | 1.84 | 1.27 | 0.18 | 2.5 | 11.67 | 16.22 | 18.39 |
| Tripura | N.A. | N.A. | -1.78 | -0.26 | -1.81 | N.A. | N.A. | 27.90 | 21.63 | 7.14 | -0.57 | 3.71 |
| Uttar Pradesh | 2.87 | -5.76 | -2.04 | 2.84 | 3.68 | 5.85 | -35.85 | 64.23 | 7.63 | 1.03 | 0.29 | 2.19 |
| Uttarakhand | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| West Bengal | -5.99 | -2.62 | -4.62 | -11.49 | 1.14 | 4.73 | 6.24 | 2.02 | 5.16 | 4.72 | 8.83 | 17.72 |
| Union Territory |  |  |  |  |  |  |  |  |  |  |  |  |
| Andaman \& Nic. Islands | 8.48 | 26.54 | 8.61 | -25.52 | -20.37 | N.A. | N.A. | 2.93 | -6.41 | 11.79 | 15.65 | 43.53 |
| Chandigarh | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | 9.84 | 9.70 | 13.15 |
| Dadra\& Nagar Haveli | N.A. | N.A. | 10.34 | 4.57 | -30.57 | N.A. | N.A. | -4.96 | 0.99 | -1.48 | 7.25 | -6.76 |
| Daman \&Diu | N.A. | N.A. | 6.24 | -2.32 | -3.92 | -100 | \#DIV/0! | -2.07 | -17.56 | 2.57 | -8.10 | -18.59 |
| Delhi | -62.62 | 160.31 | -11.88 | -0.90 | -14.74 | -4.26 | 53.33 | -25 | 3.62 | 4.43 | 4.02 | 11.37 |
| Lakshadweep | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | -3.94 | 4.51 | 20.39 |
| Pondicherry | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | 5.84 | 7.75 | 14.94 |

Source: (i)The Age Distribution of Indian Population. S.B Mukherjee (1976), East West Center, U.S.A.
(ii) Census of India (1971 to 2001): Compact Disk brought out by Census Department, Social and Cultural Tables C Series 1, India, Registrar General, India. N.A. = Data Not Available

A downward trend was noticed in the percentage of old age group population from (5.70 per cent) in 1941 to ( 5.51 per cent) in 1951 census (Table 1). Table 1 reveals that with 5.51 per cent of old age group population in India. The state of Goa recorded the highest proportion of old age group population (8.20 Per cent) (Table 1). The high proportion of old age group population in Goa was associated with the sizeable proportion of Christian population, literate state, non agricultural workers and high life expectancy in the state. Andaman and Nicobar Island was at the other end of the scale displaying the lowest proportion of old age population of ( 2.73 per cent) (Table 1).The states that portrays an improvement in the proportion of
old age population in the decade (1941-1951) included Delhi ( 53.3 per cent), Bihar ( 32.3 per cent), Haryana ( 14.8 per cent) Orissa ( 11.3 per cent), Manipur (11.1 per cent) Assam ( 9.6 per cent), West Bengal (6.2 per cent), Madhya Pradesh (4.7 per cent), Rajasthan ( 2.5 per cent) and Himachal Pradesh, Punjab and Tamil Nadu below ( 2.0 per cent) (Table 2).

Since 1951 there has been a steady increase in the percentage of population in the old age group population which reached 7.43 per cent in 2001(Table 1). Examining the state wise distribution it was observed that in 1961 census there were 16 states and Union Territories which displayed a proportion of old age group population
below the national average ( 5.64 per cent) while 11 states and Union Territories were above it (Table 1) The highest rate of increase in the percentage of old age population compared to 1951 census was found in Uttar Pradesh ( 64.2 per cent) followed by Tripura ( 27.9 per cent), Kerala ( 10.6 per cent) and Karnataka ( 8.7 per cent) (Table 2). On the other hand the rate of decline in the proportion of old age group population was recorded in the state of Bihar ( -25.8 per cent), Rajasthan ( 12.1 per cent), Punjab (10.4 per cent) and Orissa (9.9 per cent) (Table 2).

In 1971 with the exception of Goa, Nagaland, Pondicherry, Daman and Diu and Andaman and Nicobar Island all other states and Union Territories have shown an increase in the proportion of old age population as compared to previous decade (Table 2), the rate of increase in the percentage share of population in age group (60 years and above) to the total population during 1961-1971 ranges from ( 21.6 per cent) in Tripura to ( 0.1 per cent) in Himachal Pradesh. The rate of change was negative in 5 states and Union Territories namely Goa and Daman and Diu (-17.6 per cent), Pondicherry ( -7.6 per cent), Andaman and Nicobar Island ( -6.4 per cent) and Nagaland (- 1.8 per cent) (Table 2). In 1981 the state of Nagaland (11.1 per cent) followed by Manipur ( -3.6 per cent), Meghalaya ( -4.3 per cent), Lakshadweep ( -3.9 per cent) and Dadra and Nagar Haveli ( -1.5 per cent) (Table 2) showed a decrease in the proportion of old age group population. All other remaining states and Union Territories have shown increase in the proportion of old age group population ranging from ( 1.0 per cent in Uttar Pradesh to 32.2 per cent in Sikkim) among them most important were the Sikkim ( 32.2 per cent) Karnataka ( 20.6 per cent), Bihar ( 15.3 per cent) and Gujarat ( 13.1 per cent) (Table 2).

The 1991 census of the country shows an increase in the proportion of old age group population compared to the previous decades (Table 1). In terms of the rate of increase in the percentage share of population in old age group
population, the decade 1981-1991 recorded a growth of ( 5.6 per cent) as against the previous decades. The
increase in life expectancy from 54.3 years in 1981 to 59.5 years in 1991 census resulted in the growth of old population in the country. Among the various state and Union Territories of India Kerala with ( 8.82 per cent) of its population above 60 years occupied the first place among 25 states of India, it was followed by Himachal Pradesh ( 8.12 per cent), Punjab ( 7.84 per cent), Haryana ( 7.70 per cent), Tamil Nadu ( 7.45 per cent), Orissa ( 7.20 per cent) Goa ( 7.05 per cent), Tripura ( 7.01 per cent), Karnataka ( 6.99 per cent), Maharashtra ( 6.98 per cent), Uttar Pradesh ( 6.86 per cent) and Andhra Pradesh ( 6.79 per cent) (Table 1) were the states which have high proportion of old age population than the national average. Arunachal Pradesh with (4.35 per cent) of its population as old age group population was at the other end of the scale (Table 1). It was interesting to note that only one(Pondicherry) out of 7 Union Territories had a higher percentage of old age population than the national average(Table 1) (i.e.6.76) and remaining 6 Union Territories have shown the proportion of old age group population below than the national average (Table 1).

There were as many as 21 states and 6 Union Territories, which experienced an increase in the proportion of old age population, ranging from the maximum of ( 21.4 per cent) in Haryana to minimum of ( 0.2 per cent) in Meghalaya (Table 2). On the other hand there are 4 states (Tripura, Bihar, Arunachal Pradesh and Nagaland) and 1 Union Territory (Daman and Diu) in the country which recorded a decline in their growth rate in comparison to the previous decade (Table 2). The rate of decline in the percentage share of population in the old age group population to total population during 1981-1991 was highest in Nagaland (-11.1 per cent) followed by Daman and Diu ( -8.1 per cent), Bihar ( -7.8 per cent), Arunachal Pradesh ( -8.6 per cent) and Tripura ( -0.6 per cent) (Table 2).

The 2001 census again shows an increase in the proportion of old age group population by ( 0.64

Percent) (Table 2) the improvement in life expectancy from 59.3 years in 1991 to 65.3 years in 2001 and decline in death rate from 27.5per thousand persons in 1991 to 25.9 per thousand persons in 2001 were the main cause of increase in the proportion of old age group population. There were twenty three states that showed an increase in the proportion of old age group population. On the other hand the state of Nagaland and Haryana has shown a decline in the proportion of old age group population during the decade 1991-2001 (Table 2).

## IV Conclusion

Old age group population is an economic burden upon the adult age group as it is to be provided with food, clothing and sufficient health care. Increase in life expectancy from 24.65 years in 1881 to 63.5 years in 2001 census result in increase in the proportion of old age group population from 5.27 per cent in 1881 to 7.43 per cent in 2001 census. The proportion of females in old age group is larger than the proportion of males in old age groups.

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