

POPULATION IN INDIA SINCE INDEPENDENCE: AN ANALYSIS OF SIZE AND AGE COMPOSITION**Shiv Kumar**Assistant Professor of Economics,
A.S. College, Khanna (Punjab) – 141 401.**Abstract**

The main objective of this paper is to examine the size of population with its special feature, age composition, at all India level, and particularly for three states of Northern India, Punjab, Haryana and Himachal Pradesh. The paper is based on the census data collected every decade since 1951 in independent India. It is found that the population of India has increased by 235.15 per cent from 1951 to 2011. State wise the increase in population is 202.41 per cent in Punjab, 346.83 per cent in Haryana, and 187.38 per cent in Himachal Pradesh from 1951 to 2011. Overall decadal rate of increase in population of India, as well as of Punjab, Haryana and Himachal Pradesh, is falling. So, it is a positive sign for the nation, but a further big fall is the need of the country. Expecting a similar decrease in population is not enough for a country like India. It is also found that the working age (15 to 59 years) population in India is proportionately large than the other two age groups, 0 to 14 years and 60 years & above.

Key words: age, India, population, size, states

1. Introduction

Since independence the population of India is rising at alarming rates and nowadays this growing size of population in India has become a serious concern for economic policy makers. In this paper an attempt is being made to examine the size of population with its special feature, age composition, at all India level, and particularly for three states of Northern India, Punjab, Haryana and Himachal Pradesh. The paper is divided into four sections. Following introduction, second section explores the size of population in India. The age composition of population with dependency ratio is explained in section three and the final section concludes.

2. Size of Population in India

In India, every decade, population size is measured by the Office of the Registrar General of India, Ministry of Home Affairs, Government of India. India's population increased rapidly since independence (Table 1). In 1951, the population of India was 3,61,088 thousand, which increased to 12,10,193 thousand in 2011. It implies an increase of 235.15 per cent in population of India from 1951 to 2011. Decade wise, as shown in Table 2, the population of India increased by 17.64 per cent from 2001 to 2011. Among Punjab, Haryana and Himachal Pradesh, from 1951 to 2011, the population of Punjab increased from 9,161 thousand to 27,704 thousand, the population of Haryana

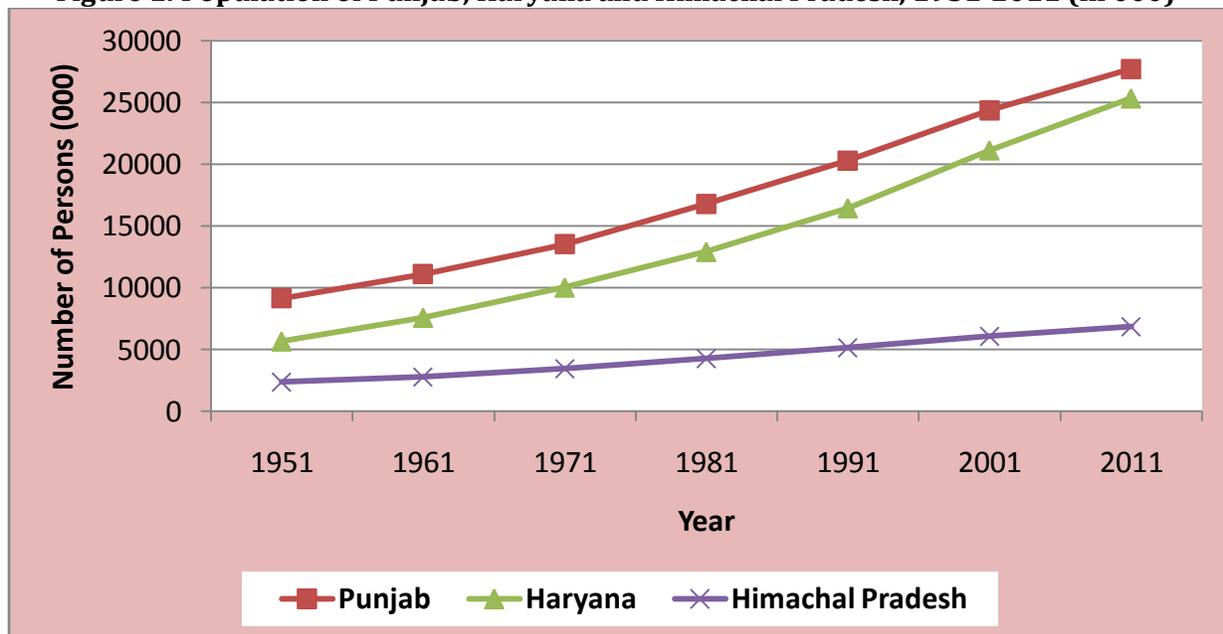
increased from 5,674 thousand to 25,353 thousand, and the population of Himachal Pradesh increased from 2,386 thousand to 6,857 thousand. It implies an increase of population by 202.41 per cent in Punjab, 346.83 per cent in Haryana, and 187.38 per cent in Himachal Pradesh from 1951 to 2011. It is found in Figure 1 that the population of Punjab and Haryana is increasing at subsequently rapid rate than the state of Himachal Pradesh. It is also observed that the pace of rate of growth of population of Punjab and Haryana states is almost same.

Table 1: Population of India, 1951-2011 (in 000)

Year	Punjab	Haryana	Himachal Pradesh	India
1951	9,161	5,674	2,386	3,61,088
1961	11,135	7,591	2,812	4,39,235
1971	13,551	10,036	3,460	5,48,160
1981	16,789	12,922	4,281	6,83,329
1991	20,282	16,464	5,171	8,46,421
2001	24,359	21,145	6,078	10,28,737
2011	27,704	25,353	6,857	12,10,193

Sources: Census of India (2001); Census of India (2011); Government of India (2013).

Figure 1: Population of Punjab, Haryana and Himachal Pradesh, 1951-2011 (in 000)



Sources: Census of India (2001); Census of India (2011); Government of India (2013).

The decadal rate of growth of population is calculated as the per cent increase in population in a decade in comparison of the size of population in the previous decade. For example for 1981, the per cent growth of population in India is 24.66, which is calculated as

$$\frac{\text{Size of Population in 1981} - \text{Size of Population in 1971}}{\text{Size of Population in 1971}} \times 100 = \frac{683329 - 548160}{548160} \times 100 = 24.66\%$$

It is evident from Table 2 that overall decadal rate of increase in population of India, as well as of Punjab, Haryana and Himachal Pradesh, is falling. In case of India, the decadal percent change in population increased from 21.64 per cent in 1961 to 24.80 per cent in 1970s, but then it continuously falls since then. In 1981, it falls to 24.66 per cent, in 1991 it falls to 23.87, then in 2001 to 21.54 and finally in 2011 to 17.64. In this decade, the rate of decadal increase in population was lowest since the 1951. So, it is a positive sign for the nation, but a further big fall is the need of the country. Expecting a similar decrease in population is not enough for a country like India.

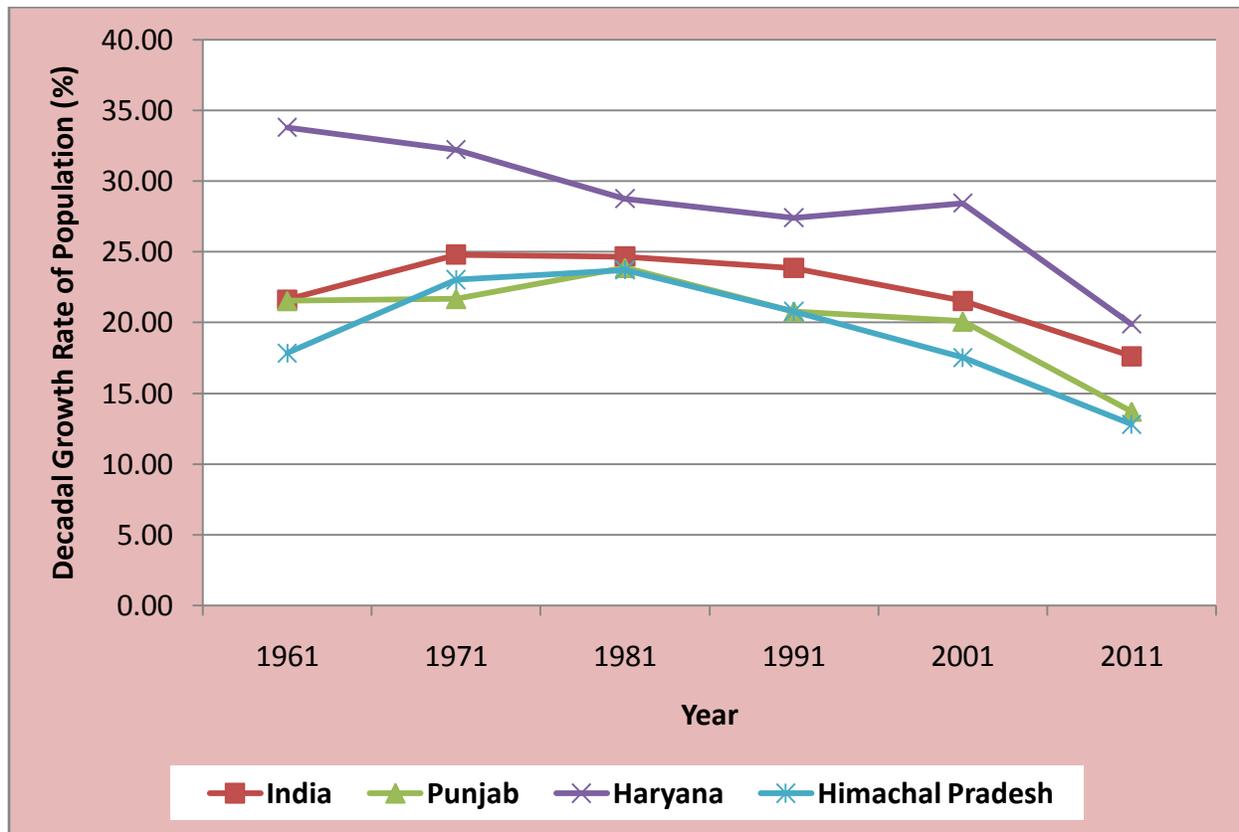
Table 2: Decade wise Percent Change in Population of India, 1951-2011

Year	Punjab	Haryana	Himachal Pradesh	India
1951	-	-	-	-
1961	21.55	33.79	17.85	21.64
1971	21.70	32.21	23.04	24.80
1981	23.89	28.76	23.73	24.66
1991	20.81	27.41	20.79	23.87
2001	20.10	28.43	17.54	21.54
2011	13.73	19.90	12.82	17.64

Sources: Calculated from data available in Economic Survey, 2012-13 (Government of India, 2013).

The decadal growth rate in population of Haryana is high in every decade since 1951 from the neighbouring states of Punjab and Haryana (Table 2 and Figure 2). Even this growth rate for Haryana is high from the national decadal rates. For example, for 1961, the decadal increase in population for India is 21.64 per cent, whereas for Haryana the corresponding rate is 33.79 per cent, which is significantly high. It is also found in Table 2 that while the fall in decadal increase in population for Haryana is not very drastic from 1951 to 2001, from 2001 to 2011, however, the state of Haryana experienced a very significant fall in its decadal growth of population. From 2001 to 2011, the decadal increase in population of Haryana decreased from 28.43 per cent to 19.90 per cent. If Haryana maintains this rate of fall in decadal increase of population, then it is expected that from 2011 to 2021, the decadal growth of population in this state will be less than the national percentage.

Figure 2: Decade wise Percent Change in Population of India, 1951-2011



Sources: Calculated from data available in Economic Survey, 2012-13 (Government of India, 2013).

Like, national decadal rates, the states of Punjab and Himachal Pradesh experienced an inverse 'U' pattern in the decadal increase rate of population (Figure 2). From 1950s to 1980s, the population increased to its highest decadal rates and then came down. However, as shown in Figure 2, the shape of inverse 'U' is more flat which represents that the rise, and then fall, in decadal increase in population is not very high. In case of Punjab, the decadal rate of population growth increased from 21.55 per cent in 1961 to 23.89 per cent in 1980s and then it fell to 20.10 per cent in 2001. Similarly, for Himachal Pradesh, decadal growth of population increased from 17.85 per cent in 1960s to 23.73 per cent in 1980s and then it fell to 17.54 per cent in 2001. However, from 2001 to 2011, the decadal growth rate of population for both of these states fell at a rapid rate. For Punjab, it decreased to 13.73 per cent and for Himachal Pradesh it decreased to 12.82 per cent. It is also observed in Figure 2 that for India and for the state of Punjab, the decadal growth rate of population was almost same in 1950s. But in the last half of the twenty first century, Punjab achieved a more decrease in the decadal growth of population than India as a whole. It is also observed that in 1950s, the decadal growth rate of population in Punjab was higher than the decadal growth rate of population in Himachal Pradesh. But in the last sixty years, Punjab came almost closer to Himachal Pradesh with respect to change in decadal growth rate of population.

3. Age Composition of Population in India

The age structure or composition of a population is the distribution of population by age of the population. Age is a central concept in demography for two reasons: (1) demographic behavior varies systematically with age, and (2) populations at one age are systematically connected with the population at subsequent ages (Walker, 2012). Dependency ratio is calculated as

Dependency Ratio

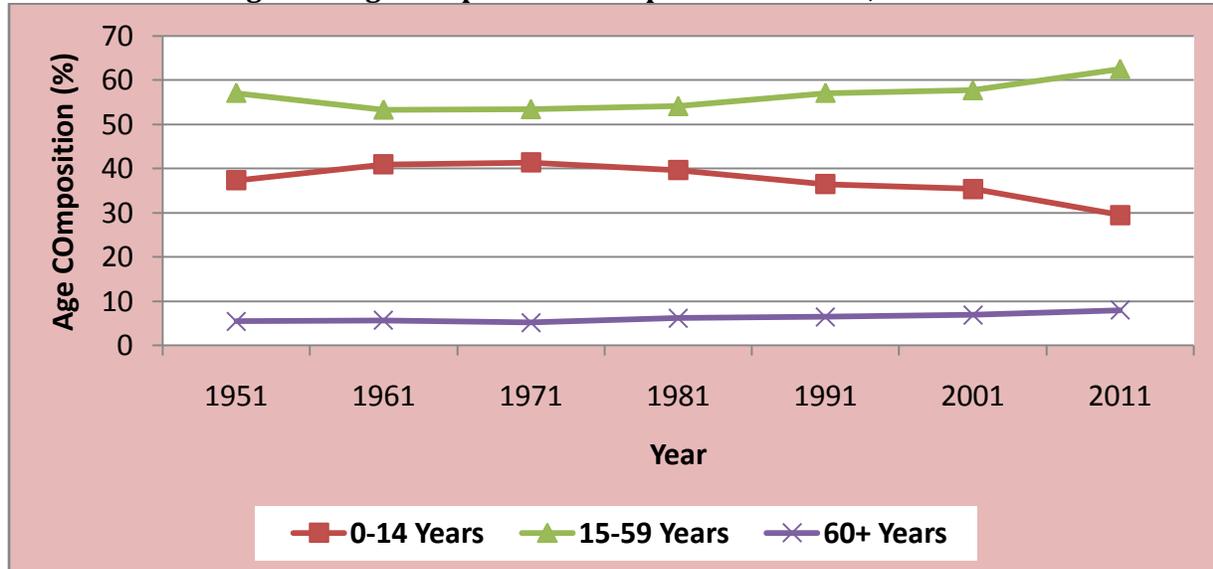
$$= \frac{\text{Population in the age group from 0 to 14 years} + \text{Population in the age group of 60 years \& above}}{\text{Population in the age group from 15 to 59 years}}$$

Table 3 and Figure 3 shows that the working age (15 to 59 years) population in India is proportionately large than the other two age groups (0 to 14 years and 60 years & above). In 2011, the children population (0 to 14 years age) is 29.5 per cent, the old age population (65 years & above) is 8.0 per cent. Thus, together, 37.5 per cent population is in non-working age, while the remaining 62.5 per cent population is in the working age group (15 to 59 years). An important fact is also found that since independence, the per cent of population in the 0 to 14 years of age group is falling except for initial two decades. Table 3 shows that this percentage has increased from 37.4 per cent in 1951 to 41.4 per cent in 1971, however, in 2011, it came down to 29.5 per cent. It clearly shows the tendency of falling birth rates in India. On the other hand, the percentage of population in the age group of 60 years & above is increasing since independence (Table 3 and Figure 3). Table 3 shows that this percentage has increased from 5.5 per cent in 1951 to 8.0 per cent in 2011. It clearly shows that the average age of population is increasing in India since independence. Thus, it is found that India is experiencing a positive side of development in both of these parameters, birth control as well as life expectancy, the pace of change, however, is not so rapid.

Table 3: Age Composition of Population in India, 1951-2011

Year	0-14 Years (%)	15-59 Years (%)	60+ Years (%)	Dependency Ratio
1951	37.4	57.1	5.5	0.75
1961	41.0	53.3	5.7	0.88
1971	41.4	53.4	5.2	0.87
1981	39.7	54.1	6.2	0.85
1991	36.5	57.1	6.5	0.75
2001	35.4	57.7	6.9	0.73
2011	29.5	62.5	8.0	0.60

Sources: Census of India (2001); Census of India (2011); Government of India (2013).

Figure 3: Age Composition of Population in India, 1951-2011

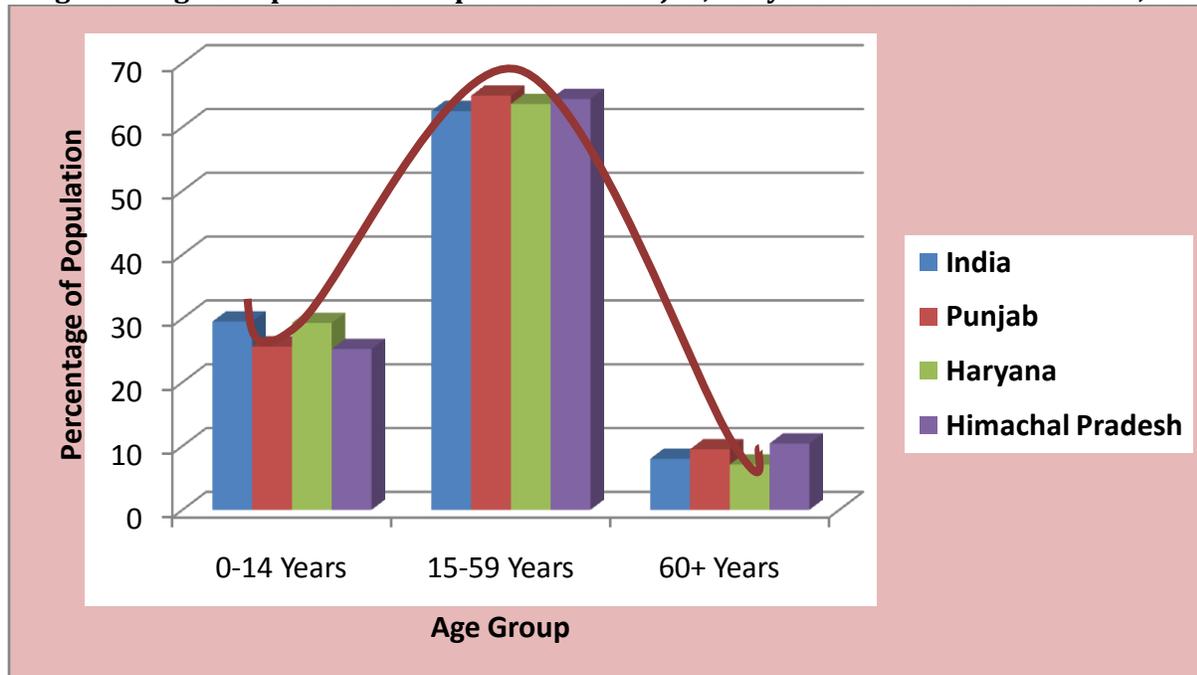
Sources: Census of India (2001); Census of India (2011); Government of India (2013).

It is found in the above discussion that India has high percentage of population in the working age as compared to the other two sides of the distribution. The same proportionate division is found in the states of Punjab, Haryana and Himachal Pradesh. Like the figures for India as a whole, in Punjab, Haryana and Himachal Pradesh, it is found that the working population is more than sixty per cent, the population in the children age group is between twenty five per cent and thirty per cent, and the older population is around ten per cent.

Table 4: Age Composition of Population in Punjab, Haryana and Himachal Pradesh, 2011

Age (Years)	Punjab	Haryana	Himachal Pradesh	India
0-14	25.6	29.3	25.2	29.5
15-59	64.9	63.6	64.4	62.5
60+	9.5	7.1	10.4	8.0
Dependency Ratio	0.54	0.57	0.55	0.60

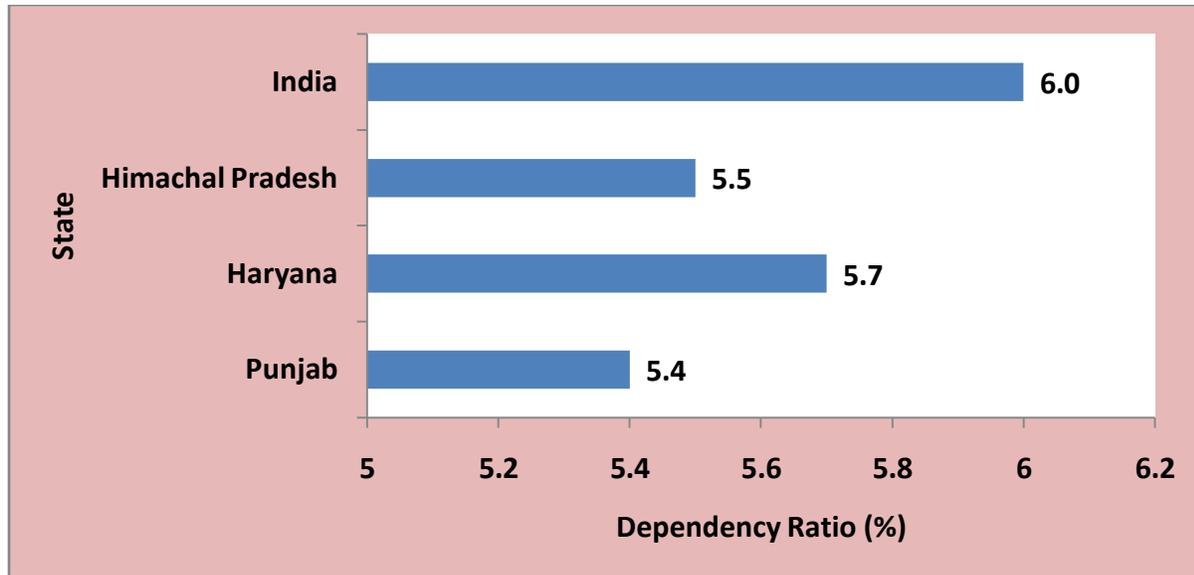
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Figure 4: Age Composition of Population in Punjab, Haryana and Himachal Pradesh, 2011

Sources: Census of India (2001); Census of India (2011); Government of India (2013).

It is also found in Table 4 and Figure 5 that the dependency ratio of population in all these three states of Punjab, Haryana and Himachal Pradesh is lower than the dependency ratio at all India level. At all India level the dependency ratio is 6.0, whereas, for Punjab, Himachal Pradesh and Haryana, the dependency ratio is 5.4, 5.5 and 5.7 respectively.

Figure 5: Dependency Ratio in Punjab, Haryana, Himachal Pradesh and India, 2011



Sources: Census of India (2001); Census of India (2011); Government of India (2013).

4. Conclusion

In this paper an attempt is being made to examine the size of population with its special feature, age composition, at all India level, and particularly for three states of Northern India, Punjab, Haryana and Himachal Pradesh. The population of India has increased by 235.15 per cent from 1951 to 2011. Decade wise, the population of India increased by 17.64 per cent from 2001 to 2011. Among three states, population increased by 202.41 per cent in Punjab, 346.83 per cent in Haryana, and 187.38 per cent in Himachal Pradesh from 1951 to 2011. It is found that the population of Punjab and Haryana is increasing at subsequently rapid rate than the state of Himachal Pradesh. It is also observed that the pace of rate of growth of population of Punjab and Haryana states is almost same. In this decade, 2001 to 2011, the rate of decadal increase in population was lowest since 1951. So, it is a positive sign for the nation, but a further big fall is the need of the country. Expecting a similar decrease in population is not enough for a country like India.

It is also found that the working age (15 to 59 years) population in India is proportionately large than the other two age groups (0 to 14 years and 60 years & above). The same proportionate division is found in the states of Punjab, Haryana and Himachal Pradesh. An important fact is also found that since independence, the per cent of population in the 0 to 14 years of age group is falling except for initial two decades. It clearly shows the tendency of falling birth rates in India. On the other hand, the percentage of population in the age group of 60 years & above is increasing since independence which reflects that the average age of population is increasing in India. Thus, it is found that India is experiencing a positive side of development in both of these parameters, birth control as well as life expectancy, the pace of change, however, is not so rapid.

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