

ABRIDGED LIFE TABLES- 2011-15

INTRODUCTION

The study of mortality which is the oldest subject in demography was first brought under systematic and rigorous analysis through the concept of life table. It is not exactly known when and by whom the concept of life table was conceived for the first time. However, from various literatures on mortality investigation and other allied topics it appears that probably the first rudimentary life table was prepared by a Roman author, Ulpian sometime during the third century A.D. But several demographers are of the opinion that the herald of life table was John Graunt, haberdasher at London in the seventeenth century. The next important advancement in the history of life table was made by Graunt's successor, Edmund Halley (1656-1742). There were many other contributors to the development of life table such as William Barton (1793), Dr. Price's Northampton (1873), and others.

2. However, the investigation on life table technique through appropriate scientific principles taking into consideration both deaths and the population exposed to risk of death classified by age, was carried out, for the first time in the history of life table, by Milne in 1857. It was based on the mortality experience in two parishes of Carlisle (English), in the period 1779-87. A large number of life tables have been published since then. In the early years, most of these pertained to European countries, particularly, Scandinavian countries, but now life tables are available for most countries of the world. The life expectancy at birth of the population in Carlisle, in 1779-87 was 38.72 years, close to that of India in the decade 1951-61 estimated by Coale and Hoover.

3. In India, life expectancy at various broad age groups has been estimated through Sample Registration System (SRS) since 1970-75. The Sample Registration System (SRS) is a large-scale demographic sample survey based on the mechanism of a dual record system with the objective of providing reliable estimates of fertility and mortality indicators at State and National levels for rural and urban areas separately. The estimated age-specific death rates derived from the SRS provide the necessary database for undertaking construction of abridged life tables. To adjust for the sampling fluctuation and for augmenting the sample size, five-year average is compiled for estimating age-specific death rates separately for rural and urban areas both for male and female. The life table for female of NCT of Delhi (Rural) could not be generated as no female deaths in the age group of 5-9 years was reported in the sample of 2011-15. The life table of Jammu & Kashmir excludes the data from Jhelum Valley for the year 2015.

4. The present report covers the life tables for the periods 2011-15. The life table has been constructed for all India and bigger States/UTs (having population 10 million and more) along with Himachal Pradesh. The life expectancy at birth for the country has undergone a significant change from 49.7 in 1970-75 to 68.3 in 2011-15, registering an increase of 18.6 years in the last four decades. It is worthy to mention that in 1970-75, the life expectancy at birth for male (50.5) was more than female (49.0). But the trend has been reversed since 1981-85. In 2011-15, the female life expectancy (70.0) is higher than that of male (66.9) by about three years. The gap between the rural and urban life expectancy has also narrowed down significantly during the same period. There are notable variations at the State level with Kerala in 1970-75 recording the highest life expectancy at birth of 62.0 years and Uttar Pradesh, the lowest, 43.0 years. In 2011-15, Kerala with 75.2 years retains its position and Uttar Pradesh with 64.5 years, has the lowest life expectancy at birth. The Report gives scenario of life expectancy at various quinquennial age groups also.

5. There are several methods for construction of life tables. In this report, the life tables have been generated using mortality package for life table estimation (MORTPAK 4), which is a United Nation's software package for mortality measurements. The various columns given in the abridged life table are ${}_nq_x$, l_x , ${}_nL_x$ and e_x . In the life table ${}_nq_x$ represents the probability of dying between exact age x and $x+n$, l_x is the expected number of persons surviving at exact age x out of the original cohort of say 1,00,000 persons; ${}_nL_x$ denotes the expected number of persons-years lived between ages x and $x+n$ years; and e_x denotes the expectation of life at age x viz. the average number of additional years a person would live if the current mortality trends were to continue.

6. The life expectancy at birth usually denoted by e_0^0 , measures the average number of years a person is expected to live under prevailing mortality conditions. Statement 1 shows the values of the expectancy of life at birth for India by sex and residence for the periods 1970-75 to 2011-15. The life expectancy at birth in 2011-15 has been 66.9 and 70.0 years for males and females respectively. The increase in life expectancy has been 0.5 years for males and 0.4 years for females over 2011-15 from 2010-14. The life expectancy has increased 0.4 years for rural and urban areas respectively as compared to 2011-15.

Statement 1

Expectation of life at birth by sex and residence, India*, 1970-75 to 2011-15 (e_0^0)

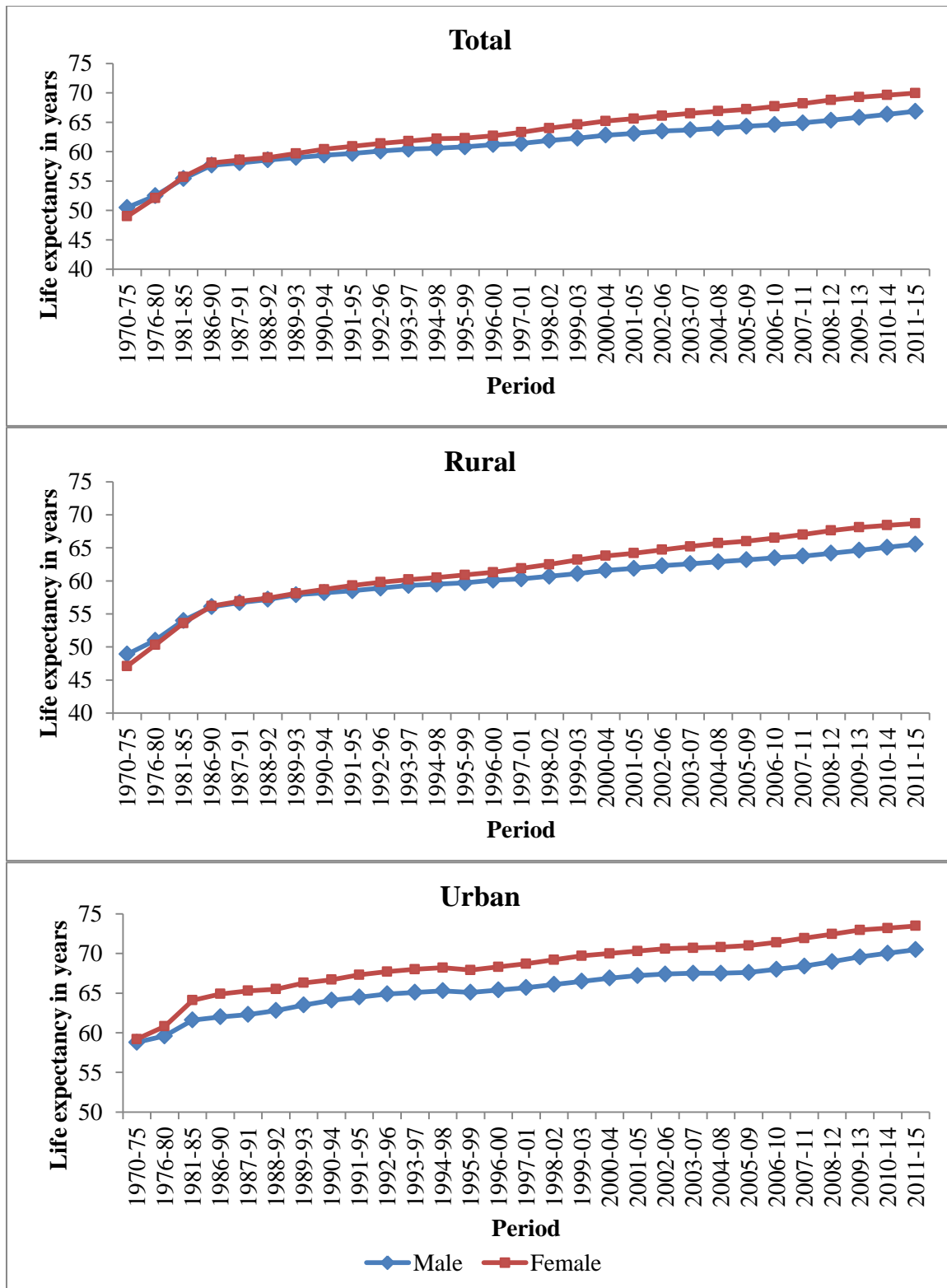
| Period | Mid-Year | Total | | | Rural | | | Urban | | |
|----------|----------|-------|------|--------|-------|------|--------|-------|------|--------|
| | | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 1970-75 | 1973 | 49.7 | 50.5 | 49.0 | 48.0 | 48.9 | 47.1 | 58.9 | 58.8 | 59.2 |
| 1976-80 | 1978 | 52.3 | 52.5 | 52.1 | 50.6 | 51.0 | 50.3 | 60.1 | 59.6 | 60.8 |
| 1981-85 | 1983 | 55.4 | 55.4 | 55.7 | 53.7 | 54.0 | 53.6 | 62.8 | 61.6 | 64.1 |
| 1986-90 | 1988 | 57.7 | 57.7 | 58.1 | 56.1 | 56.1 | 56.2 | 63.4 | 62.0 | 64.9 |
| 1987-91 | 1989 | 58.3 | 58.1 | 58.6 | 56.8 | 56.7 | 56.9 | 63.8 | 62.3 | 65.3 |
| 1988-92 | 1990 | 58.7 | 58.6 | 59.0 | 57.4 | 57.2 | 57.4 | 64.1 | 62.8 | 65.5 |
| 1989-93 | 1991 | 59.4 | 59.0 | 59.7 | 58.0 | 57.9 | 58.1 | 64.9 | 63.5 | 66.3 |
| 1990-94 | 1992 | 60.0 | 59.4 | 60.4 | 58.6 | 58.2 | 58.7 | 65.4 | 64.1 | 66.7 |
| 1991-95 | 1993 | 60.3 | 59.7 | 60.9 | 58.9 | 58.5 | 59.3 | 65.9 | 64.5 | 67.3 |
| 1992-96 | 1994 | 60.7 | 60.1 | 61.4 | 59.4 | 58.9 | 59.8 | 66.3 | 64.9 | 67.7 |
| 1993-97 | 1995 | 61.1 | 60.4 | 61.8 | 59.9 | 59.3 | 60.2 | 66.6 | 65.1 | 68.0 |
| 1994-98 | 1996 | 61.4 | 60.6 | 62.2 | 60.1 | 59.5 | 60.5 | 66.8 | 65.3 | 68.2 |
| 1995-99# | 1997 | 61.5 | 60.8 | 62.3 | 60.3 | 59.7 | 60.9 | 66.4 | 65.1 | 67.9 |
| 1996-00# | 1998 | 61.9 | 61.2 | 62.7 | 60.7 | 60.1 | 61.3 | 66.7 | 65.4 | 68.3 |
| 1997-01# | 1999 | 62.3 | 61.4 | 63.3 | 61.1 | 60.3 | 61.9 | 67.1 | 65.7 | 68.7 |
| 1998-02 | 2000 | 62.9 | 61.9 | 64.0 | 61.6 | 60.7 | 62.5 | 67.6 | 66.1 | 69.2 |
| 1999-03 | 2001 | 63.4 | 62.3 | 64.6 | 62.2 | 61.1 | 63.2 | 68.0 | 66.5 | 69.7 |
| 2000-04 | 2002 | 63.9 | 62.8 | 65.2 | 62.7 | 61.6 | 63.8 | 68.4 | 66.9 | 70.0 |
| 2001-05 | 2003 | 64.3 | 63.1 | 65.6 | 63.0 | 61.9 | 64.2 | 68.6 | 67.2 | 70.3 |
| 2002-06 | 2004 | 64.7 | 63.5 | 66.1 | 63.5 | 62.3 | 64.7 | 68.9 | 67.4 | 70.6 |
| 2003-07 | 2005 | 65.0 | 63.7 | 66.5 | 63.8 | 62.6 | 65.2 | 69.0 | 67.5 | 70.7 |
| 2004-08 | 2006 | 65.4 | 64.0 | 66.9 | 64.2 | 62.9 | 65.7 | 69.0 | 67.5 | 70.8 |
| 2005-09 | 2007 | 65.7 | 64.3 | 67.2 | 64.5 | 63.2 | 66.0 | 69.2 | 67.6 | 71.0 |
| 2006-10 | 2008 | 66.1 | 64.6 | 67.7 | 64.9 | 63.5 | 66.5 | 69.6 | 68.0 | 71.4 |
| 2007-11 | 2009 | 66.5 | 64.9 | 68.2 | 65.3 | 63.8 | 67.0 | 70.1 | 68.4 | 71.9 |
| 2008-12 | 2010 | 67.0 | 65.4 | 68.8 | 65.8 | 64.2 | 67.6 | 70.6 | 69.0 | 72.4 |
| 2009-13 | 2011 | 67.5 | 65.8 | 69.3 | 66.3 | 64.6 | 68.1 | 71.2 | 69.6 | 73.0 |
| 2010-14 | 2012 | 67.9 | 66.4 | 69.6 | 66.7 | 65.1 | 68.4 | 71.5 | 70.0 | 73.5 |
| 2011-15 | 2013 | 68.3 | 66.9 | 70.0 | 67.1 | 65.6 | 68.7 | 71.9 | 70.5 | 73.5 |

* : India includes all States/UT's

#: India does not include Jammu & Kashmir

Chart 1 presents the expectancy of life at birth between 1970-75 to 2011-15 periods separately for males and females, by residence.

Chart 1: Expectation of life at birth by sex and residence, India, 1970-75 to 2011-15



7. The values of expectancy of life at age 1 (e_1^0) by sex and residence at the national level are given in Statement 2. For the period 2011-15, the life expectancy after surviving through the first year of life has been 68.7 and 72.1 years for males and females respectively. Comparison of figures in Statement 2 with that in Statement 1 shows that the average expected life span has improved considerably after surviving through the first year of life for both males and females. This holds good for both the rural and urban areas. There has been considerable improvement in infant and child mortality under five years of age. The expectancy of life at age one in rural areas for females has surpassed that of males from 1987-91 (midyear 1989). Since 1987-91 (midyear 1989), the gap between the life expectancy of male and female in rural areas has been growing in favour of females from 0.2 years in 1989-93 to 3.4 years in 2011-15. In urban areas, the gap in the life expectancy of male and female has increased from 0.4 years in 1970-75 to 3.4 years in 2011-15.

Statement 2

Expectation of life at age 1 by sex and residence, India*, 1970-75 to 2011-15 (e_1^0)

| Period | Mid year | Total | | | Rural | | | Urban | | |
|----------|----------|-------|------|--------|-------|------|--------|-------|------|--------|
| | | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 1970-75 | 1973 | 56.2 | 57.0 | 55.6 | 54.9 | 55.8 | 54.1 | 63.3 | 63.1 | 63.5 |
| 1976-80 | 1978 | 58.6 | 58.6 | 58.6 | 57.4 | 57.6 | 57.3 | 64.0 | 63.4 | 64.7 |
| 1981-85 | 1983 | 60.9 | 60.8 | 61.1 | 59.6 | 59.8 | 59.4 | 66.0 | 64.9 | 67.3 |
| 1986-90 | 1988 | 62.4 | 62.2 | 62.6 | 61.3 | 61.4 | 61.4 | 66.3 | 65.1 | 67.6 |
| 1987-91 | 1989 | 62.8 | 62.5 | 63.1 | 61.8 | 61.7 | 61.9 | 66.3 | 65.3 | 67.9 |
| 1988-92 | 1990 | 63.0 | 63.0 | 63.2 | 62.1 | 61.9 | 62.0 | 66.7 | 65.5 | 68.0 |
| 1989-93 | 1991 | 63.6 | 63.2 | 63.9 | 62.5 | 62.3 | 62.5 | 67.4 | 66.2 | 68.8 |
| 1990-94 | 1992 | 64.1 | 63.6 | 64.5 | 63.0 | 62.7 | 63.1 | 68.0 | 66.8 | 69.3 |
| 1991-95 | 1993 | 64.5 | 63.9 | 65.1 | 63.4 | 63.0 | 63.8 | 68.6 | 67.2 | 69.9 |
| 1992-96 | 1994 | 64.9 | 64.3 | 65.6 | 63.9 | 63.4 | 64.4 | 68.9 | 67.5 | 70.3 |
| 1993-97 | 1995 | 65.3 | 64.5 | 66.0 | 64.4 | 63.7 | 64.8 | 69.2 | 67.7 | 70.5 |
| 1994-98 | 1996 | 65.5 | 64.6 | 66.3 | 64.6 | 63.8 | 65.0 | 69.2 | 67.7 | 70.6 |
| 1995-99# | 1997 | 65.5 | 64.7 | 66.3 | 64.6 | 64.0 | 65.3 | 68.7 | 67.4 | 70.2 |
| 1996-00# | 1998 | 65.7 | 64.8 | 66.6 | 64.8 | 64.1 | 65.5 | 68.9 | 67.5 | 70.4 |
| 1997-01# | 1999 | 66.0 | 65.0 | 67.1 | 65.1 | 64.2 | 66.1 | 69.2 | 67.8 | 70.8 |
| 1998-02 | 2000 | 66.5 | 65.4 | 67.7 | 65.6 | 64.6 | 66.7 | 69.6 | 68.2 | 71.3 |
| 1999-03 | 2001 | 67.0 | 65.8 | 68.4 | 66.1 | 65.0 | 67.4 | 70.1 | 68.6 | 71.8 |
| 2000-04 | 2002 | 67.5 | 66.2 | 68.9 | 66.6 | 65.4 | 68.0 | 70.3 | 68.8 | 72.0 |
| 2001-05 | 2003 | 67.8 | 66.4 | 69.3 | 66.9 | 65.6 | 68.3 | 70.5 | 68.9 | 72.3 |
| 2002-06 | 2004 | 68.1 | 66.7 | 69.6 | 67.2 | 65.9 | 68.7 | 70.7 | 69.0 | 72.6 |
| 2003-07 | 2005 | 68.2 | 66.8 | 69.9 | 67.4 | 66.0 | 68.9 | 70.8 | 69.1 | 72.7 |
| 2004-08 | 2006 | 68.4 | 66.9 | 70.0 | 67.6 | 66.1 | 69.2 | 70.7 | 69.0 | 72.6 |
| 2005-09 | 2007 | 68.5 | 66.9 | 70.2 | 67.7 | 66.2 | 69.3 | 70.8 | 69.1 | 72.8 |
| 2006-10 | 2008 | 68.7 | 67.1 | 70.5 | 67.8 | 66.3 | 69.6 | 71.1 | 69.4 | 73.0 |
| 2007-11 | 2009 | 69.0 | 67.3 | 70.9 | 68.2 | 66.4 | 70.0 | 71.5 | 69.7 | 73.5 |
| 2008-12 | 2010 | 69.3 | 67.6 | 71.3 | 68.5 | 66.7 | 70.4 | 71.9 | 70.1 | 73.9 |
| 2009-13 | 2011 | 69.7 | 67.9 | 71.7 | 68.8 | 67.0 | 70.8 | 72.4 | 70.6 | 74.3 |
| 2010-14 | 2012 | 70.0 | 68.3 | 71.9 | 69.0 | 67.3 | 70.9 | 72.6 | 71.0 | 74.4 |
| 2011-15 | 2013 | 70.3 | 68.7 | 72.1 | 69.3 | 67.7 | 71.1 | 72.9 | 71.3 | 74.7 |

* : India includes all States/UT's

#: India does not include Jammu & Kashmir

8. Statement 3 below gives the estimates of life expectancy at birth by sex and residence in bigger States/UTs in the period 2011-15. Almost all the States have recorded a higher life expectancy for females in 2011-15 both across the rural and urban areas. Kerala has recorded the highest life expectancy at birth for males and females in rural areas where as Himachal Pradesh has recorded the highest for males in urban areas and Jammu & Kashmir for female in urban areas in 2011-15. The lowest life expectancy at birth has been recorded in the State of Madhya Pradesh for rural males and Uttar Pradesh for rural females. In Urban, the lowest life expectancy at birth has been recorded in Chhattisgarh & Uttar Pradesh for males and females respectively during 2011-15.

Statement 3

Expectation of life at birth by sex and residence, India and bigger States/UTs, 2011-15, (e₀⁰)

| India & bigger States/UTs | Total | | | Rural | | | Urban | | |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| India* | 68.3 | 66.9 | 70.0 | 67.1 | 65.6 | 68.7 | 71.9 | 70.5 | 73.5 |
| Andhra Pradesh | 69.0 | 67.1 | 71.2 | 67.6 | 65.5 | 69.9 | 72.7 | 71.2 | 74.4 |
| Assam | 64.7 | 63.5 | 66.2 | 63.7 | 62.5 | 65.2 | 71.5 | 70.7 | 72.7 |
| Bihar | 68.4 | 68.5 | 68.3 | 68.1 | 68.2 | 67.9 | 71.4 | 71.1 | 71.7 |
| Chhattisgarh | 65.2 | 63.6 | 66.8 | 64.5 | 63.0 | 65.9 | 68.6 | 66.4 | 71.0 |
| NCT of Delhi | 73.8 | 72.5 | 75.4 | 71.4 | 69.5 | | 74.1 | 72.8 | 75.6 |
| Gujarat | 69.1 | 66.9 | 71.6 | 67.6 | 64.8 | 70.8 | 71.5 | 70.1 | 73.0 |
| Haryana | 69.1 | 66.9 | 71.9 | 68.2 | 65.8 | 71.2 | 71.1 | 69.2 | 73.3 |
| Himachal Pradesh | 72.0 | 69.1 | 75.2 | 71.6 | 68.6 | 74.9 | 76.8 | 75.1 | 79.4 |
| Jammu & Kashmir | 73.2 | 71.2 | 76.1 | 72.2 | 70.4 | 74.9 | 76.6 | 73.9 | 80.2 |
| Jharkhand | 67.2 | 67.0 | 67.5 | 66.3 | 66.1 | 66.3 | 71.7 | 70.8 | 72.6 |
| Karnataka | 69.0 | 67.2 | 70.9 | 67.4 | 65.4 | 69.5 | 72.0 | 70.7 | 73.5 |
| Kerala | 75.2 | 72.2 | 78.2 | 75.1 | 71.9 | 78.4 | 75.4 | 72.9 | 77.7 |
| Madhya Pradesh | 64.8 | 63.2 | 66.5 | 63.5 | 62.0 | 65.4 | 69.4 | 67.7 | 71.2 |
| Maharashtra | 72.0 | 70.3 | 73.9 | 70.7 | 69.0 | 72.5 | 73.9 | 72.1 | 75.8 |
| Odisha | 66.9 | 65.6 | 68.3 | 66.2 | 64.9 | 67.7 | 70.8 | 69.7 | 71.8 |
| Punjab | 72.1 | 70.3 | 74.2 | 70.8 | 69.0 | 72.8 | 74.1 | 72.2 | 76.5 |
| Rajasthan | 67.9 | 65.7 | 70.4 | 67.0 | 64.6 | 69.8 | 71.1 | 69.5 | 72.8 |
| Tamil Nadu | 71.0 | 69.1 | 73.0 | 69.5 | 67.6 | 71.6 | 72.8 | 71.0 | 74.7 |
| Uttar Pradesh | 64.5 | 63.4 | 65.6 | 63.6 | 62.5 | 64.8 | 68.1 | 67.3 | 68.8 |
| Uttarakhand | 71.8 | 68.9 | 74.9 | 71.1 | 67.8 | 74.7 | 74.1 | 72.7 | 75.5 |
| West Bengal | 70.5 | 69.4 | 71.8 | 69.6 | 68.3 | 70.9 | 72.7 | 71.7 | 73.9 |

* : India includes all States/UT's

Note: Andhra Pradesh includes Telangana.

9. Statement 4 and Chart 2 show the per annum average increase in the life expectancy at birth by sex in the period from 1970-75 to 2011-15 for India and bigger States/UTs. It is observed that in 2011-15 females have recorded higher increase in their life expectancy as compared to that of males. Per annum average increase in life expectancy for females is higher in comparison to that for males in all the bigger States/UTs and India. The maximum per annum average increase in life expectancy for males during the period 1970-2015 has been observed in Odisha and the minimum in Haryana. For females, the maximum annual increase has been recorded in Uttar Pradesh and the minimum in Kerala. This may also be due to the fact that Haryana & Kerala had significantly higher female life expectancy in 1970-75 as compared to other States.

Statement 4

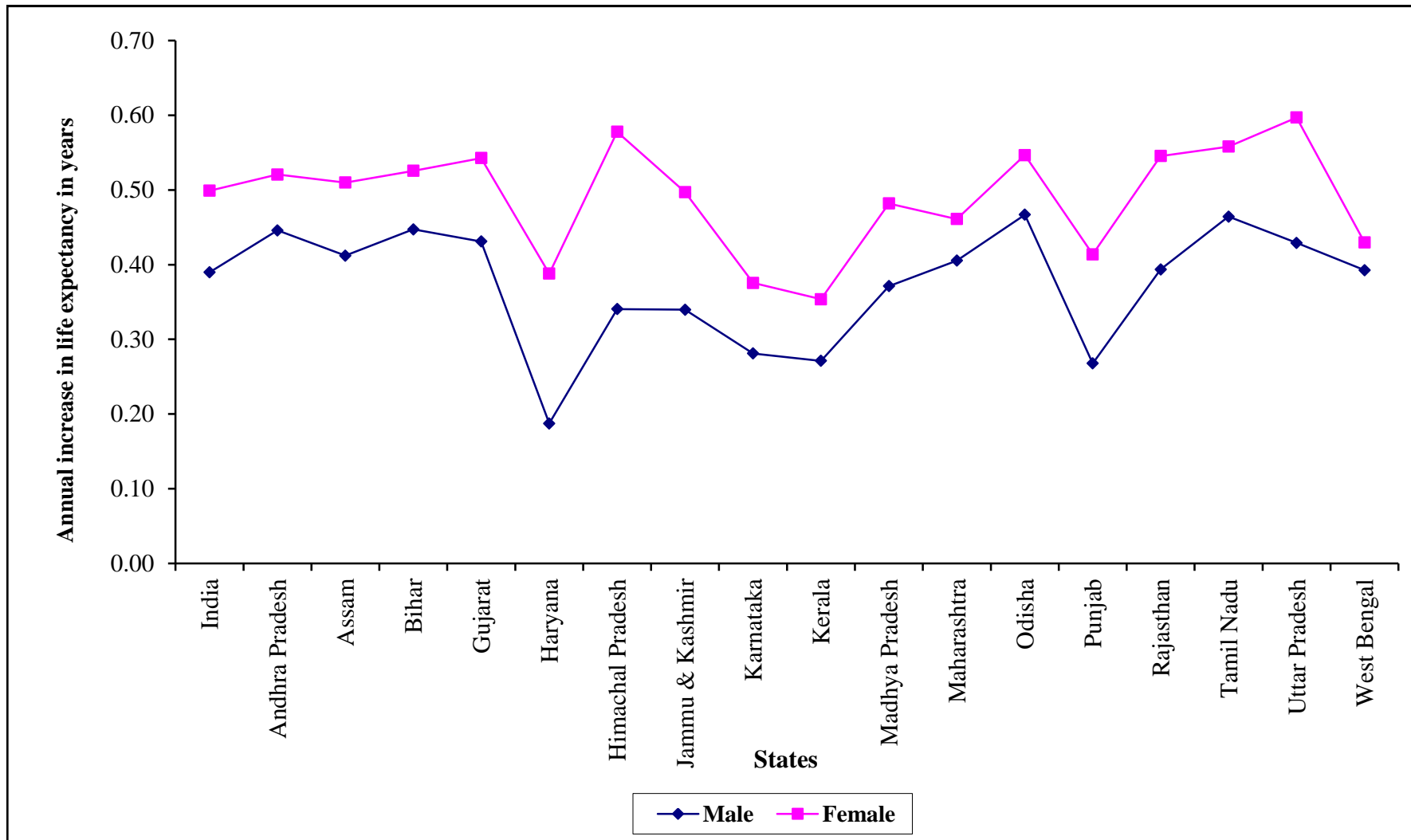
Increase in expectation of life at birth by sex, , India and bigger States, 1970-75 and 2011-15

| India & bigger States | 1970-75 | | | | 2011-15 | | | | Per annum increase in expectation of life | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|
| | Total | Male | Female | F-M ratio | Total | Male | Female | F-M Ratio | Male | Female |
| India* | 49.7 | 50.5 | 49.0 | 0.97 | 68.3 | 66.9 | 70.0 | 1.05 | 0.39 | 0.50 |
| Andhra Pradesh | 48.8 | 48.4 | 49.3 | 1.02 | 69.0 | 67.1 | 71.2 | 1.06 | 0.45 | 0.52 |
| Assam | 45.5 | 46.2 | 44.8 | 0.97 | 64.7 | 63.5 | 66.2 | 1.04 | 0.41 | 0.51 |
| Bihar (1981-85) | 52.9 | 54.2 | 51.5 | 0.95 | 68.4 | 68.5 | 68.3 | 1.00 | 0.45 | 0.53 |
| Gujarat | 48.8 | 48.8 | 48.8 | 1.00 | 69.1 | 66.9 | 71.6 | 1.07 | 0.43 | 0.54 |
| Haryana | 57.5 | 59.0 | 55.6 | 0.94 | 69.1 | 66.9 | 71.9 | 1.08 | 0.19 | 0.39 |
| Himachal Pradesh | 52.6 | 54.8 | 50.9 | 0.93 | 72.0 | 69.1 | 75.2 | 1.09 | 0.34 | 0.58 |
| Jammu & Kashmir | 56.1 | 56.9 | 55.2 | 0.97 | 73.2 | 71.2 | 76.1 | 1.07 | 0.34 | 0.50 |
| Karnataka | 55.2 | 55.4 | 55.1 | 0.99 | 69.0 | 67.2 | 70.9 | 1.05 | 0.28 | 0.38 |
| Kerala | 62.0 | 60.8 | 63.3 | 1.04 | 75.2 | 72.2 | 78.2 | 1.08 | 0.27 | 0.35 |
| Madhya Pradesh | 47.2 | 47.6 | 46.3 | 0.97 | 64.8 | 63.2 | 66.5 | 1.05 | 0.37 | 0.48 |
| Maharashtra | 53.8 | 53.3 | 54.5 | 1.02 | 72.0 | 70.3 | 73.9 | 1.05 | 0.41 | 0.46 |
| Odisha | 45.7 | 46.0 | 45.3 | 0.98 | 66.9 | 65.6 | 68.3 | 1.04 | 0.47 | 0.55 |
| Punjab | 57.9 | 59.0 | 56.8 | 0.96 | 72.1 | 70.3 | 74.2 | 1.06 | 0.27 | 0.41 |
| Rajasthan | 48.4 | 49.2 | 47.5 | 0.97 | 67.9 | 65.7 | 70.4 | 1.07 | 0.39 | 0.55 |
| Tamil Nadu | 49.6 | 49.6 | 49.6 | 1.00 | 71.0 | 69.1 | 73.0 | 1.06 | 0.46 | 0.56 |
| Uttar Pradesh | 43.0 | 45.4 | 40.5 | 0.89 | 64.5 | 63.4 | 65.6 | 1.03 | 0.43 | 0.60 |
| West Bengal (1981-85) | 57.4 | 56.8 | 58.0 | 1.02 | 70.5 | 69.4 | 71.8 | 1.03 | 0.39 | 0.43 |

*: India includes all States/UT's

Note: Andhra Pradesh includes Telangana.

Chart 2: Per annum increase in expectancy of life at birth by sex during 1970-75 to 2011-15, India and bigger States



10. The estimates of the expectancy of life at selected ages in 2011-15 for India and bigger States/UTs are given in Statement 5. The estimate at birth varies from 75.2 years in Kerala to 64.5 years in Uttar Pradesh during 2011-15. In all States, age specific death rate for the children of age less than one year is more than all other quinquennial age groups except higher ages. Therefore, expectancy of life at age one is higher than that at birth in all States but for Kerala where it is low by 0.1 years. Except life expectancy at birth and at age 70, Jammu & Kashmir retains its position as the State having the highest expectancy of life for at ages. The expectancy of life is highest for the state of Jammu & Kashmir for the age 70. At the ages 70, the minimum expectancy of life is in Chhattisgarh.

Statement 5

Expectation of life at selected ages, India and bigger States/UTs, 2011-15

| India & bigger States/UTs | Expectation of life at age | | | | | | | | | |
|---------------------------|----------------------------|------|------|------|------|------|------|------|------|------|
| | 0 | 1 | 5 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| India* | 68.3 | 70.3 | 66.9 | 62.2 | 52.7 | 43.5 | 34.4 | 25.7 | 18.0 | 11.5 |
| Andhra Pradesh | 69.0 | 70.7 | 66.8 | 62.0 | 52.4 | 43.2 | 34.3 | 25.9 | 18.3 | 12.1 |
| Assam | 64.7 | 67.1 | 64.4 | 59.7 | 50.3 | 41.1 | 32.1 | 23.6 | 16.3 | 10.4 |
| Bihar | 68.4 | 70.1 | 66.9 | 62.3 | 52.7 | 43.4 | 34.2 | 25.2 | 17.2 | 10.4 |
| Chhattisgarh | 65.2 | 67.3 | 63.8 | 59.1 | 49.7 | 40.6 | 31.8 | 23.2 | 15.5 | 9.0 |
| NCT of Delhi | 73.8 | 74.4 | 70.6 | 65.8 | 56.2 | 46.8 | 37.4 | 28.4 | 20.3 | 13.3 |
| Gujarat | 69.1 | 71.3 | 67.9 | 63.1 | 53.6 | 44.4 | 35.3 | 26.5 | 18.9 | 12.1 |
| Haryana | 69.1 | 71.3 | 67.7 | 62.9 | 53.3 | 44.1 | 35.1 | 26.5 | 19.0 | 12.8 |
| Himachal Pradesh | 72.0 | 74.0 | 70.4 | 65.5 | 55.8 | 46.4 | 37.2 | 28.2 | 20.1 | 13.4 |
| Jammu & Kashmir | 73.2 | 75.4 | 71.6 | 66.8 | 57.2 | 47.7 | 38.4 | 29.5 | 21.6 | 14.7 |
| Jharkhand | 67.2 | 68.8 | 65.5 | 60.9 | 51.5 | 42.2 | 33.2 | 24.5 | 17.0 | 10.8 |
| Karnataka | 69.0 | 70.2 | 66.5 | 61.7 | 52.1 | 42.9 | 33.9 | 25.4 | 17.6 | 10.9 |
| Kerala | 75.2 | 75.1 | 71.2 | 66.2 | 56.5 | 46.9 | 37.5 | 28.5 | 20.2 | 13.1 |
| Madhya Pradesh | 64.8 | 67.8 | 64.8 | 60.3 | 51.0 | 42.0 | 33.0 | 24.3 | 16.6 | 10.4 |
| Maharashtra | 72.0 | 72.5 | 68.7 | 63.9 | 54.3 | 45.0 | 35.9 | 27.1 | 19.0 | 12.2 |
| Odisha | 66.9 | 69.1 | 66.1 | 61.5 | 52.2 | 43.1 | 34.1 | 25.6 | 18.0 | 11.8 |
| Punjab | 72.1 | 73.0 | 69.4 | 64.5 | 55.0 | 45.7 | 36.7 | 28.2 | 20.4 | 13.6 |
| Rajasthan | 67.9 | 70.9 | 67.5 | 62.8 | 53.3 | 44.0 | 34.9 | 26.2 | 18.6 | 12.1 |
| Tamil Nadu | 71.0 | 71.5 | 67.7 | 62.8 | 53.3 | 44.0 | 34.9 | 26.2 | 18.4 | 11.6 |
| Uttar Pradesh | 64.5 | 67.8 | 64.7 | 60.0 | 50.5 | 41.3 | 32.3 | 23.9 | 16.6 | 10.7 |
| Uttrakhand | 71.8 | 72.8 | 69.2 | 64.3 | 54.7 | 45.5 | 36.4 | 28.0 | 20.4 | 14.3 |
| West Bengal | 70.5 | 71.6 | 67.9 | 63.1 | 53.5 | 44.1 | 34.8 | 25.9 | 17.9 | 11.3 |

* : India includes all States/UT's

Note: Andhra Pradesh includes Telangana.

11. Statement 6 below gives estimates on expectancy of life at selected ages for males for India and bigger States/UTs, 2011-15. The expectancy of life at birth for males varied from 72.5 years in Delhi & Kerala to 62.2 years in Madhya Pradesh during 2011-15. At age 70, the expectancy of life for males varies from 13.3 years in Jammu & Kashmir to 7.9 years in Chhattisgarh during the period under reference.

Statement 6

Expectation of life at selected ages, males, India and bigger States/UTs, 2011-15

| India & bigger States/UTs | Expectation of life at age | | | | | | | | | |
|---------------------------|----------------------------|------|------|------|------|------|------|------|------|------|
| | 0 | 1 | 5 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| India* | 66.9 | 68.7 | 65.2 | 60.5 | 50.9 | 41.7 | 32.9 | 24.5 | 17.1 | 10.9 |
| Andhra Pradesh | 67.1 | 68.7 | 64.7 | 59.9 | 50.3 | 41.2 | 32.6 | 24.6 | 17.3 | 11.5 |
| Assam | 63.5 | 65.8 | 62.9 | 58.1 | 48.7 | 39.6 | 30.8 | 22.6 | 15.6 | 9.9 |
| Bihar | 68.5 | 70.1 | 66.9 | 62.2 | 52.7 | 43.3 | 34.1 | 25.3 | 17.4 | 10.6 |
| Chhattisgarh | 63.6 | 65.6 | 61.8 | 57.0 | 47.7 | 38.7 | 30.0 | 21.6 | 14.3 | 7.9 |
| NCT of Delhi | 72.5 | 73.0 | 69.1 | 64.3 | 54.6 | 45.4 | 36.2 | 27.4 | 19.6 | 12.9 |
| Gujarat | 66.9 | 69.0 | 65.5 | 60.8 | 51.2 | 42.1 | 33.2 | 24.8 | 17.5 | 11.0 |
| Haryana | 66.9 | 68.9 | 65.1 | 60.3 | 50.7 | 41.6 | 32.8 | 24.7 | 17.7 | 11.8 |
| Himachal Pradesh | 69.1 | 71.2 | 67.6 | 62.7 | 53.0 | 43.7 | 34.7 | 26.1 | 18.3 | 12.2 |
| Jammu & Kashmir | 71.2 | 73.2 | 69.5 | 64.7 | 55.2 | 45.7 | 36.5 | 27.8 | 20.0 | 13.3 |
| Jharkhand | 67.0 | 68.4 | 65.0 | 60.4 | 51.1 | 41.9 | 33.0 | 24.3 | 16.8 | 10.7 |
| Karnataka | 67.2 | 68.3 | 64.6 | 59.7 | 50.2 | 41.0 | 32.4 | 24.2 | 16.7 | 10.4 |
| Kerala | 72.2 | 72.0 | 68.0 | 63.1 | 53.4 | 44.0 | 34.8 | 26.1 | 18.2 | 11.6 |
| Madhya Pradesh | 63.2 | 66.0 | 62.9 | 58.3 | 49.0 | 40.0 | 31.2 | 22.9 | 15.6 | 9.7 |
| Maharashtra | 70.3 | 70.8 | 66.9 | 62.1 | 52.5 | 43.3 | 34.5 | 26.0 | 18.3 | 11.8 |
| Odisha | 65.6 | 67.8 | 64.7 | 60.2 | 50.9 | 41.9 | 32.9 | 24.7 | 17.3 | 11.3 |
| Punjab | 70.3 | 71.0 | 67.2 | 62.4 | 52.8 | 43.8 | 35.0 | 27.0 | 19.4 | 13.1 |
| Rajasthan | 65.7 | 68.3 | 64.6 | 59.9 | 50.4 | 41.2 | 32.4 | 24.0 | 16.8 | 10.7 |
| Tamil Nadu | 69.1 | 69.6 | 65.7 | 60.8 | 51.3 | 42.1 | 33.2 | 24.9 | 17.5 | 11.0 |
| Uttar Pradesh | 63.4 | 66.6 | 63.2 | 58.5 | 48.9 | 39.7 | 30.8 | 22.7 | 15.8 | 10.1 |
| Uttrakhand | 68.9 | 69.8 | 66.1 | 61.4 | 51.8 | 42.6 | 33.6 | 25.6 | 18.6 | 13.0 |
| West Bengal | 69.4 | 70.4 | 66.7 | 61.9 | 52.2 | 42.8 | 33.7 | 25.0 | 17.3 | 10.7 |

* :India includes all States/UT's

Note: Andhra Pradesh includes Telangana.

12. The expectancy of life at selected ages for females in Statement 7 indicates that the highest expectancy of life at birth 78.2 years in 2011-15 has been reported in Kerala and the lowest 65.6 in Uttar Pradesh. At age 70, the variation in expectancy of life has been from 17.2 years in Jammu & Kashmir to 10.0 years in Chhattisgarh in 2011-15. The expectancy of life at different ages by sex at the national level during 2011-15 is presented in Chart 3. The graph clearly indicates that the expectancy of life for the female is higher than male at all the selected ages in the period 2011-15.

Statement 7

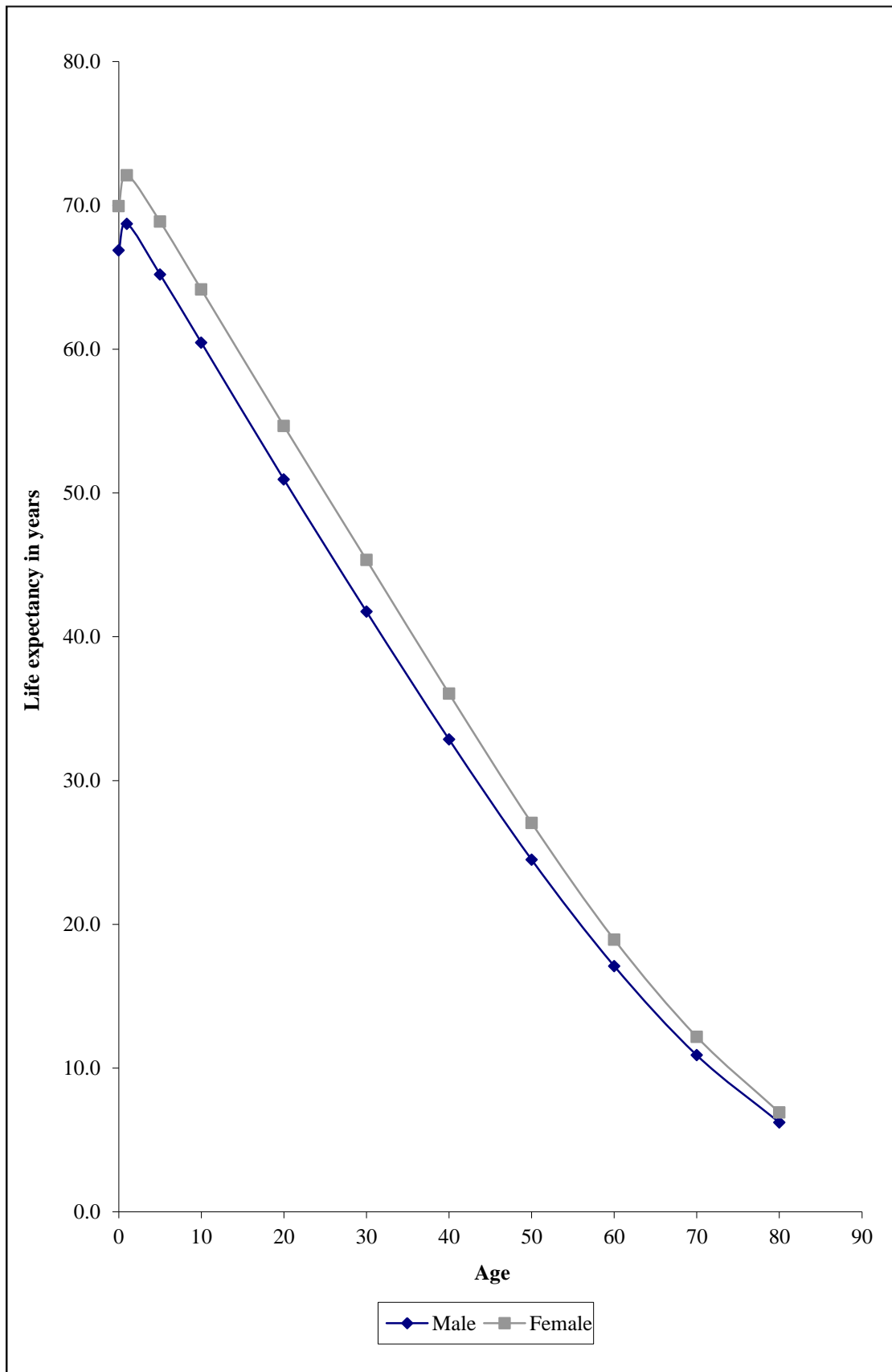
Expectation of life at selected ages, females, India and bigger States/UTs, 2011-15

| India & bigger States/UTs | Expectation of life at age | | | | | | | | | |
|---------------------------|----------------------------|------|------|------|------|------|------|------|------|------|
| | 0 | 1 | 5 | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| India* | 70.0 | 72.1 | 68.9 | 64.1 | 54.7 | 45.3 | 36.0 | 27.0 | 18.9 | 12.2 |
| Andhra Pradesh | 71.2 | 73.0 | 69.2 | 64.4 | 54.8 | 45.4 | 36.2 | 27.4 | 19.4 | 12.9 |
| Assam | 66.2 | 68.7 | 66.3 | 61.7 | 52.2 | 43.0 | 33.8 | 24.9 | 17.3 | 11.0 |
| Bihar | 68.3 | 70.1 | 67.0 | 62.3 | 52.8 | 43.5 | 34.2 | 25.1 | 17.0 | 10.2 |
| Chhattisgarh | 66.8 | 69.0 | 65.9 | 61.2 | 51.8 | 42.7 | 33.6 | 24.8 | 16.8 | 10.0 |
| NCT of Delhi | 75.4 | 76.1 | 72.4 | 67.5 | 58.0 | 48.5 | 38.9 | 29.6 | 21.1 | 13.6 |
| Gujarat | 71.6 | 73.9 | 70.6 | 65.8 | 56.3 | 47.0 | 37.6 | 28.4 | 20.4 | 13.3 |
| Haryana | 71.9 | 74.3 | 70.9 | 66.1 | 56.6 | 47.2 | 37.8 | 28.7 | 20.5 | 14.0 |
| Himachal Pradesh | 75.2 | 77.0 | 73.4 | 68.6 | 59.0 | 49.4 | 39.8 | 30.6 | 22.1 | 14.6 |
| Jammu & Kashmir | 76.1 | 78.5 | 74.7 | 69.9 | 60.3 | 50.6 | 41.2 | 32.2 | 24.1 | 17.2 |
| Jharkhand | 67.5 | 69.1 | 66.1 | 61.5 | 51.9 | 42.6 | 33.5 | 24.6 | 17.1 | 10.9 |
| Karnataka | 70.9 | 72.3 | 68.6 | 63.8 | 54.2 | 44.8 | 35.5 | 26.6 | 18.5 | 11.4 |
| Kerala | 78.2 | 78.2 | 74.3 | 69.3 | 59.5 | 49.8 | 40.2 | 30.9 | 22.1 | 14.3 |
| Madhya Pradesh | 66.5 | 69.8 | 67.1 | 62.5 | 53.3 | 44.3 | 35.0 | 26.0 | 17.8 | 11.1 |
| Maharashtra | 73.9 | 74.5 | 70.7 | 65.8 | 56.2 | 46.7 | 37.4 | 28.3 | 19.7 | 12.6 |
| Odisha | 68.3 | 70.7 | 67.7 | 63.0 | 53.7 | 44.5 | 35.4 | 26.6 | 18.7 | 12.4 |
| Punjab | 74.2 | 75.2 | 71.8 | 66.9 | 57.4 | 47.9 | 38.6 | 29.6 | 21.4 | 14.1 |
| Rajasthan | 70.4 | 73.8 | 70.8 | 66.2 | 56.6 | 47.2 | 37.8 | 28.7 | 20.5 | 13.5 |
| Tamil Nadu | 73.0 | 73.6 | 69.8 | 65.0 | 55.5 | 46.1 | 36.7 | 27.7 | 19.3 | 12.2 |
| Uttar Pradesh | 65.6 | 69.2 | 66.3 | 61.7 | 52.2 | 43.1 | 34.0 | 25.2 | 17.5 | 11.3 |
| Uttarakhand | 74.9 | 76.1 | 72.5 | 67.6 | 58.0 | 48.7 | 39.4 | 30.5 | 22.3 | 15.5 |
| West Bengal | 71.8 | 73.0 | 69.3 | 64.5 | 55.0 | 45.6 | 36.1 | 26.9 | 18.7 | 12.0 |

* : India includes all States/UT's

Note: Andhra Pradesh includes Telangana.

Chart 3: Expectancy of life at birth and conditional life expectancy at Selected ages by sex, India, 2011-15



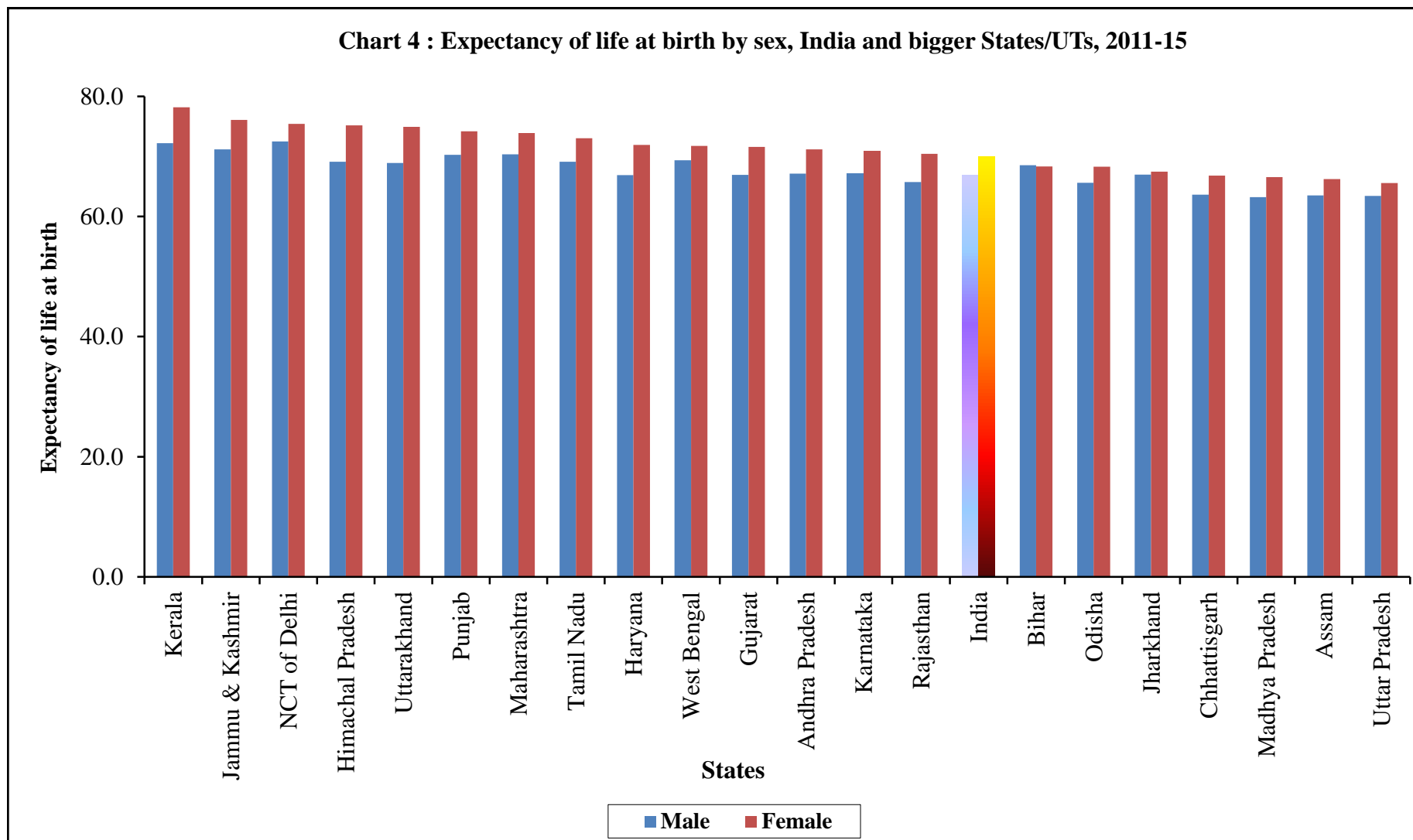
13. The expectancy of life at birth, infancy, childhood and retiring age (60 years) has been graphically presented in Chart 4 to 7 by sex for India and bigger States/UTs. To improve readability, all charts have been depicted in descending order of female expectancy of life. Chart 4 presents State level expectancy of life at birth for males and females during 2011-15. The female life expectancy at birth is higher than males in all the States except Bihar. The female life expectancy at birth is highest in the State of Kerala followed by Jammu & Kashmir and Delhi whereas it is the lowest for Uttar Pradesh preceded by Assam and Madhya Pradesh in that order.

14. Chart 5 gives graphical presentation of expectancy of life at infancy (age 1) during 2011-15 for India and bigger States/UTs separately for males and females. In general, the expectancy of life at age 1 is higher than that at birth. The expectancy of life for female after attaining the age of 1 is higher than that of males in all the States. The female life expectancy at infancy is the highest in the State of Jammu & Kashmir followed by Kerala and Himachal Pradesh whereas it is the lowest for Assam preceded by Chhattisgarh and Jharkhand in that order.

15. The State-wise expectancy of life at childhood (age 5) separately for males and females is presented in Chart 6. The female expectancy of life at childhood is higher than males for all bigger States/UTs. The female life expectancy at childhood is highest in the State of Jammu & Kashmir followed by Kerala and Himachal Pradesh whereas it is lowest for Chhattisgarh preceded by Jharkhand and Assam in that order. It has been observed that the first two positions in terms of female expectancy of life at birth, infancy and childhood have been occupied by Kerala and Jammu & Kashmir whereas the last place is taken by Uttar Pradesh and Assam at birth, and Assam and Chhattisgarh at infancy and Chhattisgarh and Jharkhand for childhood life expectancy.

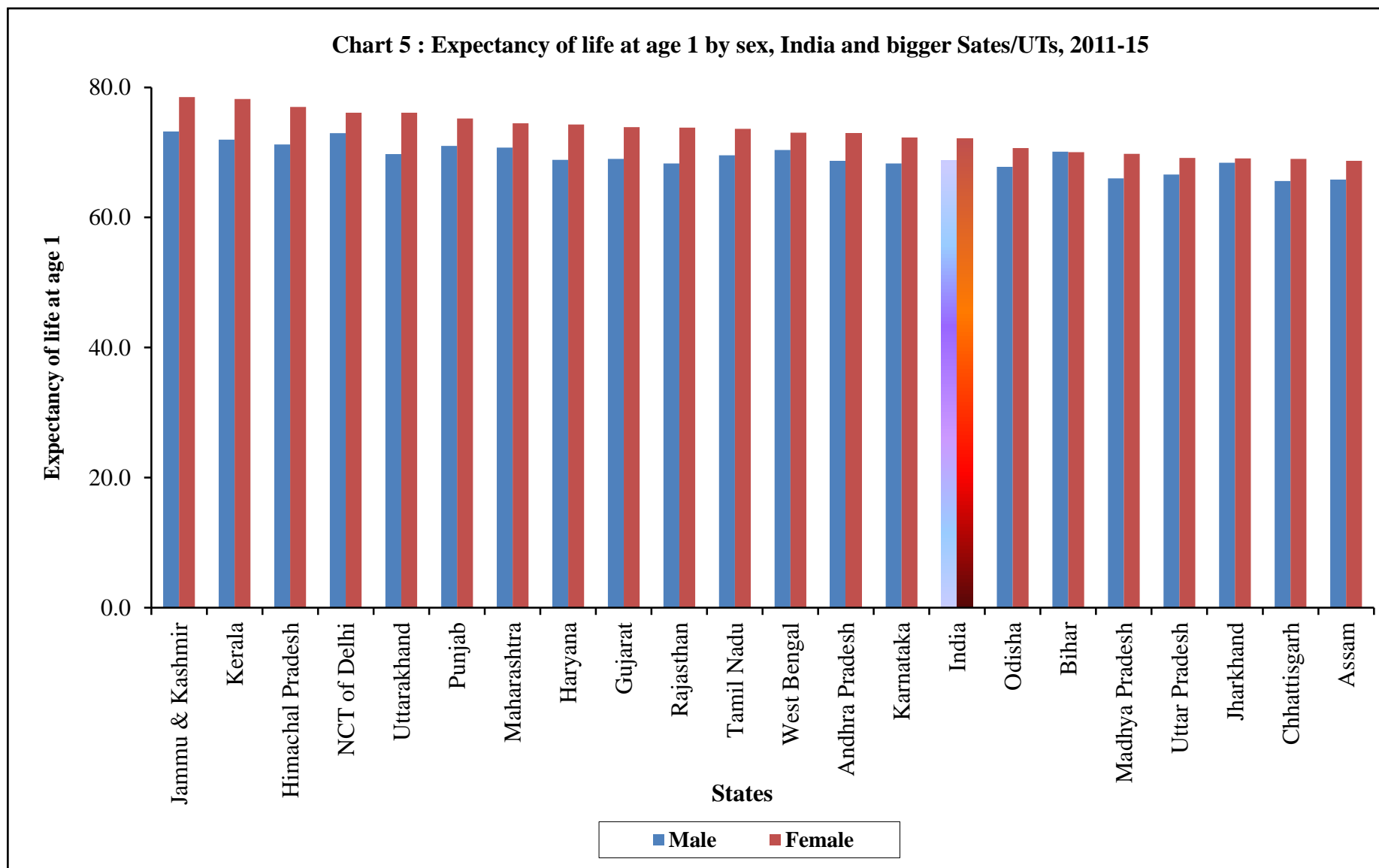
16. Chart 7 gives graphical presentation of expectancy of life at retiring age (age 60) during 2011-15 for India and bigger States/UTs separately for males and females. The female expectancy of life at age 60 is also higher than that of males in all the bigger States/UTs. The female life expectancy at age 60 is highest in the State of Jammu & Kashmir followed by Uttarakhand and Kerala whereas it is the lowest for Chhattisgarh preceded by Jharkhand and Bihar in that order. The inter-se position of States in terms of expectancy of life at age 60 differs than that at younger ages. At age 60, Jammu & Kashmir and Uttarakhand exceed Kerala, which occupies the first position in ranking the expectancy of life at birth. Even at age 60, the expectancy of life differs significantly by sex and from State to State.

Chart 4 : Expectancy of life at birth by sex, India and bigger States/UTs, 2011-15



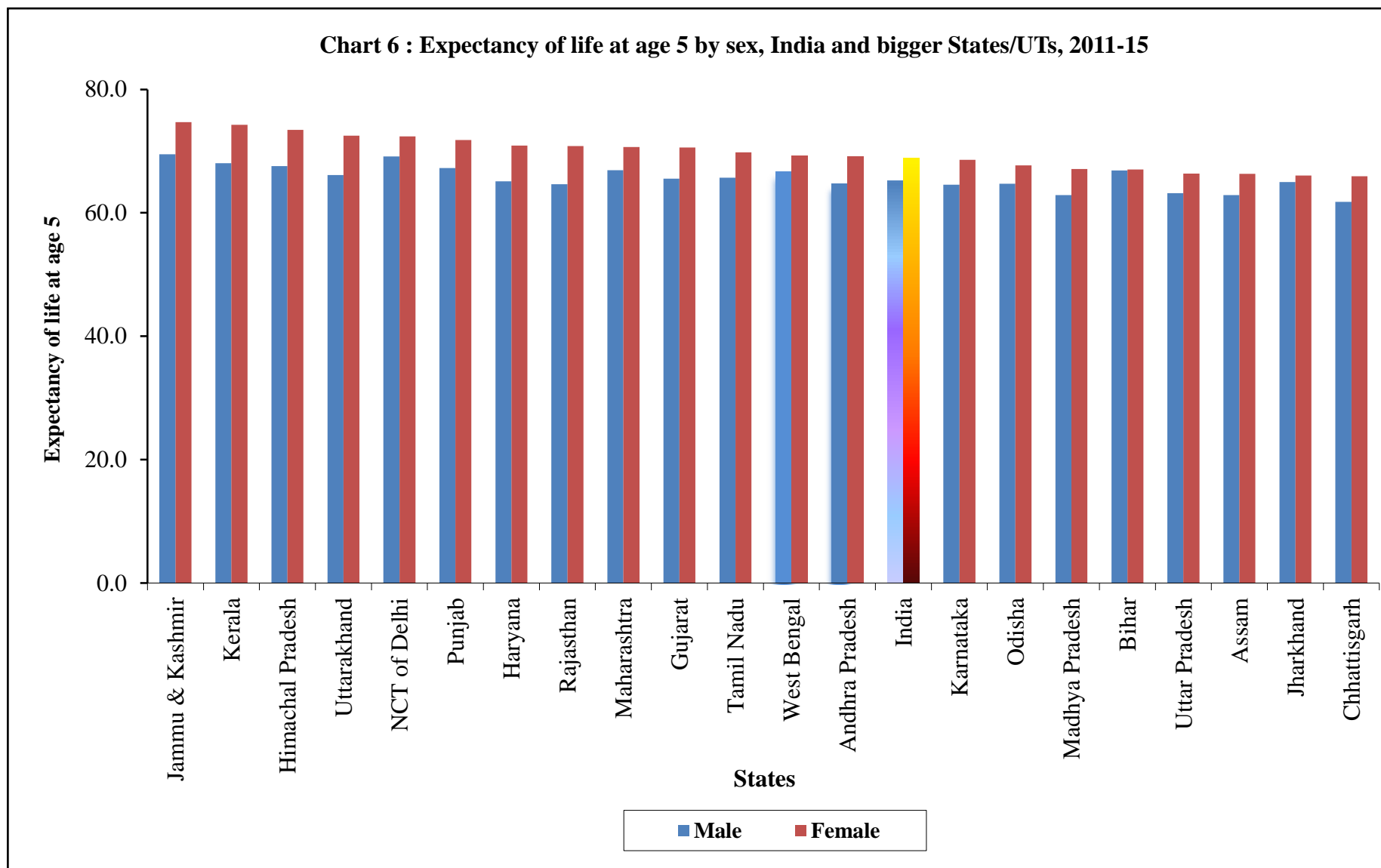
Note : Data arranged in descending order of female life expectancy.

Chart 5 : Expectancy of life at age 1 by sex, India and bigger States/UTs, 2011-15



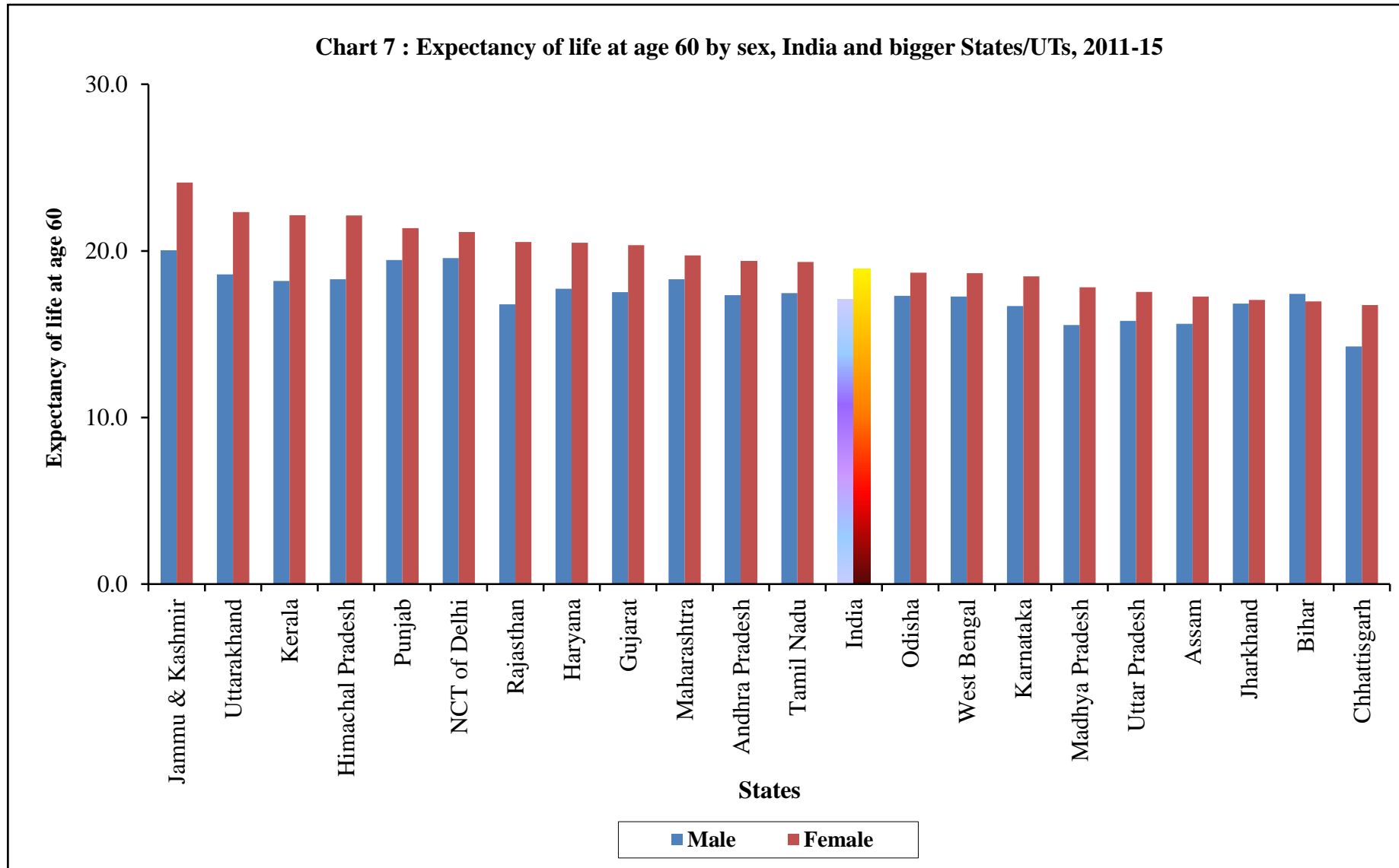
Note : Data arranged in descending order of female life expectancy.

Chart 6 : Expectancy of life at age 5 by sex, India and bigger States/UTs, 2011-15



Note : Data arranged in descending order of female life expectancy.

Chart 7 : Expectancy of life at age 60 by sex, India and bigger States/UTs, 2011-15



Note : Data arranged in descending order of female life expectancy.

17. The State-wise variation in estimated life expectancy at birth by sex during 2011-15 is presented in Chart 8. Seven out of twenty one States fall below all-India difference (3.1) between female and male life expectancy at birth, whereas the remaining fourteen States are above it with Chhattisgarh & Madhya Pradesh registering the lowest and Himachal Pradesh the highest gap respectively. Kerala has reported significantly higher life expectancy at birth for female child as compared to the male child.

18. The State-wise female-male gap in life expectancy at age 70 during 2011-15 is presented in Chart 9. Jammu & Kashmir has registered the highest favorable gap of 3.9 years, whereas the lowest gap of 0.2 years has been reported for the state of Jharkhand.

Chart 8 : Difference in female to male expectancy of life at birth, State-wise, 2011-15

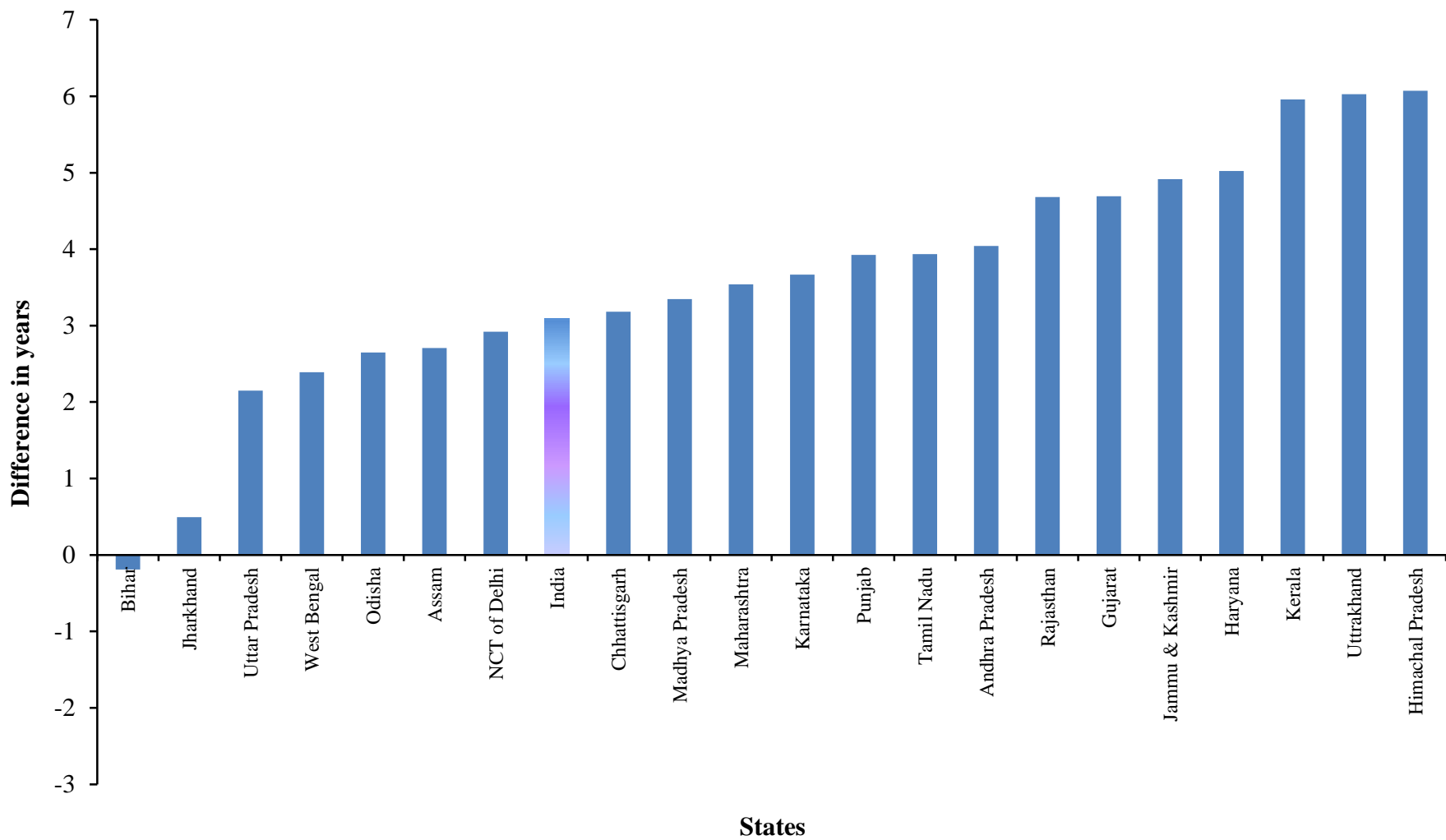


Chart 9 : Difference in female to male expectancy of life at age 70+, statewise, 2011-15

