

Comparative Statistics of Women Health Indicators in India and China

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Abstract—India and China had begun their respective journeys of development way back in 1950s. These economies adopted different strategies, of development in general and human development in particular, to overcome the shackles of backwardness. While India did not pursue a development model with clear goals, China started the process of development with a model which turned out to be a Foreign Direct Investment (FDI)-driven approach. But after more than sixty-five years of their journeys of development, China seems to have surpassed India in terms of various variables of development-women health being one among them. The Chinese economy reflects a better picture with regards to the health sector than the Indian economy. The present paper tends to bring out a comparative scenario of the women health indicators in India and China. It endeavours to present a statistical analysis of maternal mortality ratio (MMR) between India and China. The paper seeks to envisage number of maternal deaths and life-time risk of maternal death. Attempts have also been made in comparing the statistics of the prevalence of anaemia among pregnant women and non-pregnant women in these two economies. The present paper has tried to show that China has been performing far better concerning women health than India. India has failed to provide better health facilities to her women inhabitants while China has succeeded fairly in terms of women health facilities. The paper has also listed vital policy implications and recommendations to improve the plight of women health in India.

Keywords: Health, MMR, Maternal death, Anaemia.

1. THE CONTEXT

Women health, across the globe, has been a much discussed and debated issue. A variety of women health matters are prevalent in the contemporary times which have attracted the attention of the governments, NGOs, academicians, professionals and institutions et cetera. The plight of poor health conditions concerning women, prevalent in the world in general and in the developing economies in particular, needs to be taken care of in the most efficient way. Be it the maternal mortality ratio or prevalence of various health disorders such as anaemia among pregnant and non-pregnant women et cetera, each has to be tackled with much effort. India and China have been able to attain improved levels of various women health indicators in the recent past, but China seems to have reached to a much higher point than India.

Therefore, India needs to learn a lot from the experiences of China to improve the status of women health.

The health systems of China and India along with financing, organization, and regulation of health care have been studied. Efficiency, quality, and level of access to health care are the determining factors of improving health conditions in India and China. The health care system must focus on provisions of better health, decline financial medical costs and raise the level of consumer satisfaction. It has been concluded that both China and India have achieved decent figures in life expectancy, disease prevention and various other indicators; these gains are reflected more substantially in China than in India. India must restructure health care financing in order to reduce the pressure medical care costs, raise provisions of care facilities especially in rural areas, produce capacity for detecting new and emerging diseases, and build infrastructure in health sector to meet local needs [13].

There have been various factors responsible for deaths based on the basis of gender in India and China. Major cause of this scenario has been the prevalent role of maternal mortality in both the economies. Although maternal mortality has always been an important issue included in the national health care programmes, but its adverse effects have still been experienced by India and China. Since maternal mortality rate in India was 212 per 1000 (in 2012) and it had been six times higher than that of China's, China presents a decent picture of women health than that of India [7]. The maternal mortality rate in India in the year 2005 was 301 per 100,000 live births where as it was only 30 per 100,000 live births in China in the same year [18]. The estimated number of maternal deaths in India in the year 2010 had been 56,000 whereas in China these statistics were 6,000 only. India seems to have been unsuccessful in declining the number of maternal deaths whereas China seems to have performed way better than India [19]. At the global levels, females have been more likely to die under the age of five years than males are. As a matter of great concern, facts have been drawn that females do have a bit of advantage. But on the contrary, in some of the economies like China and India, mortality rates for female children under five years of age are higher than male children. Since last 20 years,

it has been indicated that the female disadvantages have envisaged being prevalent in India and may happen to be worst in certain other economies such as China and Pakistan [26].

India and China have also been facing issues like prevalence of anaemia among pregnant as well as non-pregnant women. While 53.6 % pregnant women in India were anaemic, only 21.8 % pregnant women were anaemic in China in 2011. In the same year, the percentage of non-pregnant women with anaemia in India was 47.8 % while in China; the percentage of non-pregnant women who were anaemic was 19.4 % only. It can be observed that China has been performing well with respect to all the indicators of women health in comparison to India. India has been lagging far behind China in this particular sphere [27].

2. PRIME OBJECTIVES

- To compare and analyze the statistics of women health indicators in India and China.
- To suggest certain important recommendations and policy implications to improve women health conditions in India.

3. HYPOTHESES

H0: Women health indicators in China are way better than in India.

H1: Women health indicators in China reflect a poor picture than in India.

Note: **H0**- Null Hypothesis, **H1**- Alternative Hypothesis.

4. DATA ILLUSTRATION

Data for various women health indicators in India and China has been illustrated. A comparative study, based on the data availed from world development indicator from the year 2002 to 2015, has been pursued to come to a point to acknowledge the difference of the women health statuses between India and China. The following variables have been given much emphasis in the present paper:

4.1. Maternal Mortality Ratio (MMR)

MMR is the number of women who die from pregnancy or related causes while pregnant or within 42 days of pregnancy termination per 100,000 live births [27]. Statistics has been represented for MMR in India and China. MMR in India is 265 and in China is 45 in the year 2006 respectively. In the years 2007 and 2008, MMR in India are 250 and 237 respectively, and in China are 43 and 40 respectively. These figures are 225, 215 and 206 in India, and 38, 35 and 33 in China in the years 2009, 2010 and 2011 respectively. In the years 2012, 2013 and 2014 respectively, MMR in India are 197, 189 and 181 and in China are 31, 29 and 28. In the year

2015 respectively, MMR in India is 174 and in China is 27. Data can be analyzed from table 1.

Table 1: Maternal Mortality Ratio (Per 100,000 Live Births)

| Years | India | China |
|-------|-------|-------|
| 2006 | 265 | 45 |
| 2007 | 250 | 43 |
| 2008 | 237 | 40 |
| 2009 | 225 | 38 |
| 2010 | 215 | 35 |
| 2011 | 206 | 33 |
| 2012 | 197 | 31 |
| 2013 | 189 | 29 |
| 2014 | 181 | 28 |
| 2015 | 174 | 27 |

Source: World Development Indicators, 2006-15

4.2. Life-Time Risk of Maternal Death (%)

Life time risk of maternal death is the probability that a 15-year-old female will die eventually from a maternal cause assuming that current levels of fertility and mortality (including maternal mortality) do not change in the future, taking into account competing causes of death [27]. Life-time risk of maternal death (%) in India is 0.83 and in China is 0.066 in the year 2006 respectively. These percentages are 0.76 and 0.71 in India, and 0.062 and 0.059 in China in the years 2007 and 2008 respectively. These percentages are 0.65, 0.61 and 0.57 in India, and 0.056, 0.053 and 0.050 in China in the years 2009, 2010 and 2011 respectively. Life-time risk of maternal death (%) in the years 2012, 2013, 2014 and 2015 respectively are 0.54, 0.51, 0.47 and 0.45 in India, and 0.047, 0.045, 0.043 and 0.042 in China. The statistical figures for life-time risk of maternal death (%) in the economies of India and China can be well noticed, studied and evaluated from table 2.

Table 2: Life-Time Risk of Maternal Death (%)

| Years | India | China |
|-------|-------|-------|
| 2006 | 0.83 | 0.066 |
| 2007 | 0.76 | 0.062 |
| 2008 | 0.71 | 0.059 |
| 2009 | 0.65 | 0.056 |
| 2010 | 0.61 | 0.053 |
| 2011 | 0.57 | 0.050 |
| 2012 | 0.54 | 0.047 |
| 2013 | 0.51 | 0.045 |
| 2014 | 0.47 | 0.043 |
| 2015 | 0.45 | 0.042 |

Source: World Development Indicators, 2006-15

4.3. Number of Maternal Deaths

A maternal death refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes [27].

Number of maternal deaths in India is 73,000 in India and 7,200 in China in 2006 respectively. It is 68,000 and 64,000 in India, and 6,800 and 6,500 in China in the years 2007 and 2008 respectively. In the years 2009, 2010 and 2011 respectively, number of maternal deaths in India are 60,000, 57,000 and 54,000, and in China are 6,200, 5,800 and 5,500. These figures are 52,000, 49,000 and 47,000 in India, and are 5,200, 4,900 and 4,600 in China in the years 2012, 2013 and 2014 respectively. Number of maternal deaths in 2015 respectively is 45,000 in India and is 4,400 in China. Data for maternal deaths has been depicted in table 3.

Table 3: Number of Maternal Deaths

| Year | India | China |
|------|-------|-------|
| 2006 | 73000 | 7200 |
| 2007 | 68000 | 6800 |
| 2008 | 64000 | 6500 |
| 2009 | 60000 | 6200 |
| 2010 | 57000 | 5800 |
| 2011 | 54000 | 5500 |
| 2012 | 52000 | 5200 |
| 2013 | 49000 | 4900 |
| 2014 | 47000 | 4600 |
| 2015 | 45000 | 4400 |

Source: World Development Indicators, 2006-15

4.4. Prevalence of Anaemia among Pregnant Women (%)

Prevalence of anaemia among pregnant women is the percentage of pregnant women whose haemoglobin level is less than 110 grams per litre at sea level [27]. Prevalence of anaemia among pregnant women (%) in India is 55.2 and in China is 22.9 in 2002 respectively. These percentages are 55.3, 55.3 and 55.2 in India, and are 22.4, 22.1 and 21.9 in China in the years 2003, 2004 and 2005 respectively. In the years 2006, 2007 and 2008 respectively, these percentages are 55, 54.7 and 54.4 in India and are 21.8, 21.7 and 21.7 in China. These percentages are 54.2 and 53.9 in India, and 21.7 and 21.7 in China in the years 2009 and 2010 respectively. Prevalence of anaemia among pregnant women (%) in India is 53.6 and in China are 21.8 in the year 2011 respectively. Statistical data with respect to prevalence to anaemia among pregnant women (%) in India and China has been illustrated in table 4.

Table 4: Prevalence of Anaemia among Pregnant Women (%)

| Year | India | China |
|------|-------|-------|
| 2002 | 55.2 | 22.9 |
| 2003 | 55.3 | 22.4 |
| 2004 | 55.3 | 22.1 |
| 2005 | 55.2 | 21.9 |
| 2006 | 55.0 | 21.8 |
| 2007 | 54.7 | 21.7 |
| 2008 | 54.4 | 21.7 |
| 2009 | 54.2 | 21.7 |
| 2010 | 53.9 | 21.7 |
| 2011 | 53.6 | 21.8 |

Source: World Development Indicators, 2002-11

4.5. Prevalence of Anaemia among Non-Pregnant Women (%)

Prevalence of anaemia among non-pregnant women is the percentage of non-pregnant women (15-49 years of age) whose haemoglobin level is less than 120 grams per litre at sea level [27]. Prevalence of anaemia among non-pregnant women (%) in India is 54.5 and in China is 18 in 2002 respectively. These percentages are 54.5, 54.5 and 54 in India, and are 17.5, 17.3 and 17.2 in China in the years 2003, 2004 and 2005 respectively. In the years 2006, 2007 and 2008 respectively, these percentages are 53.4, 52.5 and 51.4 in India and are 17.3, 17.6 and 17.9 in China. These percentages are 50.2 and 48.9 in India, and 18.2 and 18.8 in China in the years 2009 and 2010 respectively. Prevalence of anaemia among non-pregnant women (%) in India is 47.8 and in China is 19.4 in the year 2011 respectively. Data for prevalence of anaemia among non-pregnant women (%) in India and China can be well observed and analyzed from table 5.

Table 5: Prevalence of Anaemia among Non-Pregnant Women (%)

| Years | India | China |
|-------|-------|-------|
| 2002 | 54.5 | 18.0 |
| 2003 | 54.5 | 17.5 |
| 2004 | 54.4 | 17.3 |
| 2005 | 54.0 | 17.2 |
| 2006 | 53.4 | 17.3 |
| 2007 | 52.5 | 17.6 |
| 2008 | 51.4 | 17.9 |
| 2009 | 50.2 | 18.2 |
| 2010 | 48.9 | 18.8 |
| 2011 | 47.8 | 19.4 |

Source: World Development Indicators, 2002-11

5. INTERPRETATION AND FINDINGS

First, it can be observed that maternal mortality ratio (MMR) in India and China has been declining. It has come down to 174 in 2015 from 265 in 2006 in India and to 27 in 2015 from 45 in 2006 in China. Second, it is interpreted that life-time risk of maternal death (%) has also been coming down to 0.45 in 2015 from 0.83 in 2006 in India and to 0.043 in 2015 from 0.066 in 2006 in China. Third, it is analyzed that number of maternal deaths has declined in both the economies. It has diminished from 73,000 in 2006 to 45,000 in 2015 in India and from 7,200 in 2006 to 4,400 in 2015 in China. Fourth, the prevalence of anaemia among pregnant women (%) has been declining since 2002 in India and China. In India, it has fallen to 53.6 in 2011 from 55.2 in 2002, and in China, it has fallen to 21.8 in 2011 from 22.9 in 2002. Last, the prevalence of anaemia among non-pregnant women (%) of age group 15-49 years has also been declining in India but rising in China. It has come down to 47.8 in 2011 from 54.5 in 2002 in India, and it has risen in China from 18 in 2002 to 19.4 in 2011.

After data illustration and interpretation, it has been discovered that both India and China have been experiencing improvements in the statuses of women health respectively.

But it has been observed that China has been performing far better than India in this particular segment of development. The levels of maternal mortality ratio (MMR) have been lowered in India and China but India's MMR is still six times higher than that of China. Similarly, the life-time risk of maternal death (%) has come down in India and China since 2006, but here also China seems to have performed better than India. India's life-time risk of maternal death is about eleven times more than that of China. Number of maternal deaths has been declining at a fairer pace in China than in India. Maternal deaths in India are eight times higher than in China. India and China have been observing declining trends in prevalence of anaemia among pregnant women. But India reflects higher statistics of the same than China. Prevalence of anaemia among pregnant women is more than two times higher in India than in China. There has been a declining trend with regard to prevalence of anaemia among non-pregnant women in India but China shows a rising trend in the same sphere. Instead of the fact that China has shown an upward trend, India still has higher statistics of prevalence of anaemia among non-pregnant women. Prevalence of anaemia among non-pregnant women in India is more than two times higher than in China.

6. CONCLUDING REMARKS AND POLICY

Implications

India has been lagging behind China in terms of women health status. While China has reflected higher levels of women health, India seems to have struggled to provide better health facilities to women. The present paper has posed a clear picture of a comparative statistics of women health indicators in India and China. India has been left behind China in every aspect of the women health discussed in this paper. For instance, China has been fairly able to control maternal mortalities and prevalence of anaemia among women than India. India's picture of women health has posed a very dark and dim scenario. India has been entangled in the shackles of poor levels of women health conditions. China has been showing tremendous improvements in terms of women health because of better health provisions. Be it health and medical facilities or budgetary outlays in health sector, China has shown higher statistics than India. For instance, average number of nurses (per 1,000 people) available in India in 2012 is 1.72 while it stays high at 1.85 in China in the same year. Health expenditure per capita (current US \$) in India is 61.40 while in China is 366.86 in 2013. Total health expenditure (% of GDP) in India is 3.96 and in China, it is 5.56 in the year 2013 [27]. Since China has been doing far well than India in terms of women health, the null hypothesis (H0) has been accepted while the alternative hypothesis (H1) has been rejected.

The present study endeavour to put forward certain recommendations and policy implications to improve the women health conditions in India. India must learn from the experiences of success of China in health sector in general and

women health sector in particular. First, India must raise the budgetary outlays for health sector so as to build and strengthen the health and medical infrastructure in order to extend facilities of health and medical provisions to larger extents. Second, special programmes focussing on the improvement of women health must be initiated and well-executed so as to ensure a better health status to the women in India. Focus must be emphasized over attaining and securing a proper and balanced nutritional level for women in India. Third, certain awareness campaigns and drives must be held to educate the common masses about the importance of women health. Last, importance of the women health and policies to overcome poor women health conditions in India must be supported by various organisations at local, national as well as international platforms so as to observe a fast improving health conditions for women in India which could be sustained for a long while to come.

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