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### **Fertility Indicators in North East India by NFHS-4**

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#### **ABSTRACT**

India could not achieve the national goal of replacement fertility (2.1) even after 71 years of Independence. The failure is mainly caused by the disadvantages associated with tribal and backward communities. The present study aims to examine the levels of important fertility indicators in North East (NE) India. Based on NFHS-4 (2015-16) dealing with the information generated from currently married women of age 15-49 years, the indicators are considered to be total fertility rate, literacy rate, sex ratio, marriage age, infant and child mortality, contraceptive use, unmet needs of family planning etc. Out of the eight NE states, six ones are lagging behind the national fertility goal except those in two states viz. Sikkim (1.2) and Tripura (1.7). Despite some visible improvement in the current rates of infant and child mortality, literacy, and total fertility; the demographic imbalance is witnessed in sex ratio. The changes in the level of contraceptive use and unmet needs of family planning for the last decade are observed to be heterogeneous among the states. The rural-urban differential may also be one of the causes of variations in these fertility indicators.

**KEYWORDS:** North East, rural-urban, contraceptives, unmet needs, replacement fertility

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## **INTRODUCTION**

With 1.21 billion populations in 2011 and it will be around 1.7 billion in 2050 leading to first populous country<sup>1</sup>, India is lagging behind the national goal of replacement fertility, 2.1 children per woman by 2010 as main component of a stable population by 2045 at a level consistent with sustainable development. In one sense, India is known to be the first country to formulate the National Family Planning (FP) Programme in 1952 in the world. The main target of the programme is to promote responsible parenthood with a two child norm through independent choice of PF method best suited to the acceptor. Despite, the rate for acceptance and practice of FP methods varies within societies due to many constraints in their own and also more than 70,000 children added daily to the Indian population.<sup>2</sup> During the last decade (2001-2011), it grew by 17.7% adding 181 million people to the country's population. But, the world total fertility has declined to 2.6 children in 2005-2010.<sup>3</sup> The Ministry of Home Affairs<sup>4</sup> also reports that in about forty year (1965-2009) period, the contraceptive usage has more than quadrupled say from 13% of married women in 1970 to 56% in 2006, and the total fertility rate has more than halved (from 5.7 in 1996 to 2.7 in 2006) but the national fertility rate is still high to generate long term population growth. Meanwhile, the United Nations estimated that world population grew at an annual rate of 1.23% during 2001-2010 while India's population grew at 1.64% per annum during 2001-2011.

The total fertility rate (TFR) in 2013 is estimated at 2.3 births per woman for India as a whole.<sup>5</sup> It is at or below the replacement level in 13 out of the 17 Indian states and Union Territories in the 1<sup>st</sup> phase of NFHS-4.<sup>6</sup> The TFR ranges from 1.2 births per woman in Sikkim to 3.4 births per woman in Bihar. Many research findings also confirmed that fertility reduces with increase in socio-economic status. Kerala, for instance, has controlled fertility in the late 20<sup>th</sup> century through its socio-economic development.<sup>7</sup> The overall prevalence of contraceptive in the state is observed to be 70.3% which is associated with age and parity but not literacy.<sup>8</sup> But, in spite of so much emphasises given to rural and backward communities since seventy-one years of Indian independence, North East States are nowhere near a satisfactory solution in terms of socio-demographic status. In this view, the present study is to examine the recent pattern of variation in fertility indicators in the North Eastern Region of India.

## **MATERIALS AND METHODS**

So far NFHS-4 is concerned, eight NE States – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura represent the NE Region of India in this study. Based on NFHS-4 (2015-16) figures dealing with the information generated from currently married women of age 15-49 years, the fertility indicators considered here are total fertility rate, literacy rate,

sex ratio, marriage age, infant and child mortality, contraceptive use, unmet needs of family planning etc. The previous data of NFHSs (1-3)<sup>9</sup> figures have also been utilized to check the trend and changes in the indicators.

## RESULTS AND DISCUSSION

In the NFHS-4 (2015-16), it is observed that more than 80% of the NE populations from the three states – Assam (2.2), Manipur (2.6), Meghalaya (3.0), Mizoram (2.3) and Nagaland (2.7) are lagging behind the national fertility goal except those in two states viz. Sikkim (1.2) and Tripura (1.7). However, Meghalaya and Sikkim have equally reduced the TFR by 0.8 children during the last decade (2005-2015). Tripura also follows the reducing rate by 0.5 children. The two states – Assam and Manipur can reduce as little as 0.2 children in TFR during the decade. The rural-urban differential may also be one of the causes of variations in these fertility indicators. This differential in TFR is found to be highest (1.8), say 1.7 in urban and 3.5 in rural in Meghalaya which is followed by Manipur and Assam with rural-urban difference each of 0.8 children. The lowest difference of 0.1 children is found in Sikkim in the survey report depicted in Table - 1. The present findings confirmed that the urban fertility is below the replacement level in the study population. In their findings of Shekhar et al., (2014) considering the 15 States and 2 Union Territories in NFHS-4 (2015-16) also highlighted that urban fertility levels are at or below the replacement level (2.1 children) except Bihar (2.4 children).

**Table - 1: Levels of Fertility Indicators in North Eastern States**

States and Parameters	NFHS-4 (2015-16)			NFHS-3 (2005-06)
	Urban	Rural	Total	Total
<b>Total Fertility Rate (TFR)</b>				
Arunachal Pradesh	1.7	2.3	2.1	3.0
Assam	1.5	2.3	2.2	2.4
Manipur	2.1	2.9	2.6	2.8
Meghalaya	1.7	3.5	3.0	3.8
Mizoram	2.0	2.7	2.3	2.9
Nagaland	1.8	3.4	2.7	3.7
Sikkim	1.1	1.2	1.2	2.0
Tripura	1.4	1.8	1.7	2.2
<b>Female Literacy Rate (parenthesis-figures for male literacy rate in%)</b>				
Arunachal Pradesh	80.9(91.4)	60.1(81.9)	65.5(84.5)	52.7(78.9)
Assam	87.0 (93.2)	69.2 (80.7)	71.8 (82.8)	63.0 (76.4)
Manipur	89.9 (97.4)	81.7 (95.2)	85.0 (96.0)	72.6 (91.5)
Meghalaya	93.4 (95.7)	79.6 (80.8)	82.8 (84.0)	69.5 (72.7)
Mizoram	98.6(99.3)	85.4(96.3)	93.5(98.2)	94.0(93.2)
Nagaland	89.9(93.2)	75.1(80.6)	81.0(85.6)	75.2(83.1)
Sikkim	89.5 (93.3)	85.2 (90.0)	86.6 (91.5)	72.3 (83.1)
Tripura	88.4 (95.2)	77.0 (87.0)	80.4 (89.5)	68.5 (77.1)
<b>Sex Ratio at birth (parenthesis-figures for sex ratio of total population)</b>				

Arunachal Pradesh	848(973)	941(953)	920(958)	1071(930)
Assam	794 (996)	945 (993)	929 (993)	1033 (1008)
Manipur	962 (1081)	962 (1030)	962 (1049)	1014 (1070)
Meghalaya	891 (1067)	1030 (991)	1009 (1005)	907 (1005)
Mizoram	926(1043)	970(973)	946(1013)	1025(1004)
Nagaland	1014(1011)	935(946)	956(968)	984(991)
Sikkim	632 (936)	911 (944)	809 (942)	984 (936)
Tripura	1100 (1051)	925 (978)	966 (998)	959 (1017)
<b>Infant Mortality Rate</b> (parenthesis-figure for under-five mortality rate)				
Arunachal Pradesh	19(25)	24(35)	23(33)	61(88)
Assam	28 (40)	50 (58)	48 (56)	66 (84)
Manipur	16 (18)	25 (30)	22 (26)	30 (42)
Meghalaya	15 (20)	32 (43)	30 (40)	44 (70)
Mizoram	31(35)	50(58)	40(46)	34(53)
Nagaland	21(25)	33(42)	29(37)	38(65)
Sikkim	13 (18)	38 (39)	29 (32)	34 (40)
Tripura	12 (21)	31 (36)	27 (33)	51 (59)
<b>Total Unmet Need</b> (parenthesis-figure for indicates unmet need for spacing in %)				
Arunachal Pradesh	25.4(15.9)	20.4(11.7)	21.6(12.7)	21.2(8.4)
Assam	12.9 (4.9)	14.4 (5.9)	14.2 (5.8)	12.2 (3.6)
Manipur	29.8 (11.8)	30.2 (13.3)	30.1 (12.7)	15.6 (5.0)
Meghalaya	21.2 (13.9)	21.2 (15.6)	21.2 (15.3)	35.8 (23.2)
Mizoram	19.1(11.3)	20.9(13.7)	19.9(12.4)	18.1(12.3)
Nagaland	22.5(10.7)	22.0(11.5)	22.2(11.2)	28.4(10.0)
Sikkim	24.5 (9.8)	20.3 (8.4)	21.7 (8.9)	20.4 (5.8)
Tripura	11.1 (4.2)	10.5 (4.1)	10.7 (4.1)	12.4 (3.7)
<b>Use of any FP Methods</b> (parenthesis-figures for use of any modern FP method in %)				
Arunachal Pradesh	26.5(23.5)	33.3(27.6)	31.7(26.6)	43.2(37.3)
Assam	54.9 (38.4)	52.0 (36.8)	52.4 (37.0)	56.5 (27.0)
Manipur	25.0 (12.9)	22.7 (12.6)	23.6 (12.7)	48.7 (23.6)
Meghalaya	32.8 (27.6)	22.4 (20.6)	24.3 (21.9)	24.3 (18.5)
Mizoram	38.5(38.4)	31.5(31.5)	35.3(35.3)	59.9(59.6)
Nagaland	31.3(25.5)	24.2(19.2)	26.7(21.4)	29.7(22.5)
Sikkim	36.9 (35.6)	51.4 (50.9)	46.7 (45.9)	57.6 (48.7)
Tripura	66.8 (43.1)	63.0 (42.7)	64.1 (42.8)	65.7 (44.9)

Despite some visible improvement in the current rates of infant and child mortality, literacy, and total fertility; the demographic imbalance is witnessed in sex ratio. The changes in the level of contraceptive use and unmet needs of family planning for the last decade are observed to be heterogeneous among the NE states. In case of total unmet need, the states under study may be divided into two groups say below 20% (Assam with 14.2% and Tripura with 10.7%) and above 20% (Manipur with 30.1%, Sikkim with 21.7% and Meghalaya with 21.2%). Besides, the unmet need for spacing is highest in Meghalaya with 15.3% and followed by Manipur with 12.7%. These two states are also observed to be highest position in the country in the total unmet need for family planning methods as per NFHS-4 report. The lowest unmet need for spacing in the region is observed in Tripura (4.1%). One of the remarkable findings of the present study is that the unmet

need for spacing is found increased from NFHS -3 (2005-06) to NFHS-4 (2015-16) in all NE states under consideration except Meghalaya as 15.3% in NFHS-4 and 23.2% in NFHS-3. Meanwhile, Manipur may be noted to have reducing more than halve of the use of FP methods from 50% (NFHS-3) to 24% (NFHS-4). The similar pattern of decrease is also seen in the state in case of use any modern FP methods (24% to 13%). Though lowering from the NFHS-3, the IMRs in NE States could also not achieve the national goal as evidenced in NFHS-4 viz., Assam (48), Manipur (22), Meghalaya (30), Sikkim (29) and Tripura (27) as against the NFHS-3's respective figures 66, 30, 44, 34, and 51. The pattern of changes in the fertility indicators under study for the last ten years are very emerging but most of them are still lagging behind the national socio-demographic goals.

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