

# STATUS OF WOMEN'S HEALTH IN INDIA: A COMPARATIVE STUDY OF BIHAR & JHARKHAND STATES

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**Abstract-** Women have a key role in the socio-economic development of any nation. Women are essential contributors to our communities. Healthy women are crucial for maintaining the welfare of families, societies, and nations. Overall development of women, especially improved health status of women leads to social change and this change provides the base to achieve the targets of sustainable development. Despite the fact the health status in the states of Bihar and Jharkhand are still lagging behind the national average and other best performing states. The present paper attempts to analyze the comparative health status of women in India and in the selected states of Bihar & Jharkhand on the basis of selected indicators related to nutritional, maternal and reproductive health. Study reveals that among the most of the selected indicators the performance of Bihar is poor and in terms of national average both the states are lagging behind the national average. Jharkhand is the only state that has seen improvement among pregnant women aged 15-49, with a decrease of 9.26%.

**Key words:** Women Health, Maternal Health & Reproductive Health

## INTRODUCTION

Health, Education, Economic Empowerment, and Social Equality are key aspects of women's development. Women's development is crucial for both human rights and sustainable advancement in society and the economy. The condition of an individual's health is a critical determinant of the overall welfare of the human species and a prerequisite for human progress. When considering the condition of health, women are significantly more hazardous and unfavorable than men. In contrast to males, females exhibit a higher propensity for experiencing menstrual cycles of illness; however, their propensity to promptly seek medical attention prior to the onset of a more grievous condition is diminished. Maternal mortality, infectious diseases, malnutrition, and neonatal complications are among the principal determinants that contribute to the general deterioration of women's health.

The modern era is considered the most advanced period in terms of human healthcare and economic capacity. However, not all individuals are able to benefit from these opportunities. (Derose KP, et al., 2011). Health encompasses more than just health care; it also involves the holistic advancement of society in cultural, economic, educational, social, and political aspects. Thus, in order to maintain good health, it is essential to consider other contributing elements as well. (Sabina Begum, 2018).

Reproductive health, as defined by the World Health Organization (WHO), encompasses the whole physical, mental, and social well-being in all aspects associated to the reproductive system and its functioning. The definition was released in 2006. "Reproductive health" encompasses human sexuality and the reproductive processes, functions, and system across all life stages. It suggests that people can engage in a sexual life that is responsible, fulfilling, and secure. Moreover, it suggests that people have the capacity to procreate and the autonomy to choose if, when, and how often they engage in reproduction. Both men and women have the right to access safe, effective, inexpensive, and accepted techniques for managing their fertility. These procedures are legal. Both men and women have the right to obtain suitable health care services for safe pregnancy and childbirth, increasing the likelihood of a healthy infant. Reproductive health advantages impact an individual's entire lifespan, beginning before to sexual maturity and continuing beyond the years of reproduction.

Women, who are frequently vulnerable, play critical roles in significant population-centric efforts, which are strongly linked to education, health, and nutrition. Educating women to a higher degree not only enhances their well-being but also speeds up economic progress. Women's health concerns are influenced by interconnected biological, social, and cultural aspect. According to the 2001 Census, just 54.3% of Indian women are literate. Women's literacy levels can influence reproductive behaviour, contraceptive use, child health and rearing, correct hygiene practices, access to jobs, and women's general social position (Mallikharjuna Rao et al., 2010). Access to medical treatment, maternal care, and reproductive health services is critical for maintaining good health. Most health indices have improved significantly in

recent decades, including lower rates of newborn, maternal, and infant death, as well as fertility. (Yadav S, Arokiasamy P, 2014 December). During pregnancy and nursing, a woman's nutritional status is critical to both her own and her unborn child's health. A well-balanced diet rich in micronutrients is necessary for women of all ages (Figure 2). Improving women's health and nutritional condition through education and economic opportunities can help them develop and thrive.

**Fig 1. Importance of Nutrition**



Women and child development are vital markers for assessing a nation's economic performance. The state of a nation can be accurately assessed by examining the well-being of its women and children. A country or state government that prioritizes women and child development has achieved greater progress compared to others (Singh Umendra 2022). Jharkhand and Bihar have the lowest Human Development Index (HDI) scores among all states, with 0.589 and 0.571 respectively, as per the HDI Report 2021-22. Bihar and Jharkhand have the highest rates of multidimensional poverty among the states, with 52% and 42% respectively (NITI Aayog, 2021). The National Family Health Survey (NFHS)-5 shows that a greater percentage of women in Bihar (27%) and Jharkhand (29%) are underweight compared to the national average of 21.5%, indicating significant levels of malnutrition among women in these states. Bihar and Jharkhand are ranked second to last and last, respectively, in the composite SDG Index created by NITI Aayog, based on SDG 2 for Zero Hunger and overall development indicators (Government of India, 2020-21). Bihar and Jharkhand are confronted with a significant problem in attaining decent health and nutrition security, as stated by Sharma et al. (2023).

The NITI Aayog (2019) has identified 17 indicators/goals under the Sustainable Development Goals (SDGs) to evaluate women's health circumstances, encompassing aspects such as poverty eradication, hunger elimination, health improvement, education quality, and gender equality. Bihar ranked third from the bottom in terms of performance on the topic of excellent health and well-being (SDG3), with Uttar Pradesh and Nagaland being the two lowest performing states. The health and well-being situation, particularly the reproductive health of women in Bihar, requires immediate attention in this context (Kumari Tripti & Santosh Verma 2021).

## REVIEW OF LITERATURE

Gender development is crucial for societal progress as it fosters fair development and sustains sustainable growth. The central and state governments have implemented several programs to tackle gender discrimination and inequality nationwide. However, issues linked to gender development persist in India, particularly in the Empowered Action Group (EAG) states. Most EAG states fall under the Medium HDI category, with a Human Development Index ranging from 0.550 to 0.699. India was ranked 140th out of 156 nations in the Global Gender Gap Index (GGGI) report, with a score of 0.625 out of 1. According to the Global Nutrition Survey-2016, India ranks 170 out of 180 nations for the prevalence of anemia among women, indicating a concerning condition. This study analyzes the gender development status in Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh, and Uttarakhand. It ranks the best and worst performing states among EAG states based on different gender development indicators (Umendra Singh 2022). A study conducted by Navaneeta Majumder (2021) shows the socio-economic and nutritional status of tribal married women in Jharkhand with the use of inquiry, dietary and anthropometric methods of nutritional assessment and found that household food insecurity and low calorific intake are the main reasons for undernourishment among tribal women.

A study conducted by Nowaj Sharif, Bhaswati Das & Asraful Alam (2023) to examine the level and trend of Anemia among the socially disadvantaged groups of women as compared to the other women reveals that the SC&ST women are more affected by anemia than OBC and general category. A report published by the GOI Planning Commission in 2008 indicates that bias against women and girls impacts their health rights, resulting in declining health and nutrition measures. India is grappling with elevated maternal mortality rates, increasing instances of anemia, malnutrition, and HIV/AIDS in women. Sourav Biswas et al. (2022) conducted a study on the distribution of underweight, normal weight, overweight, and obese women in India using data from NFHS-5. They utilized a multinomial logistic regression model to examine the relationship between various background characteristics and BMI. A large number (63.5%) of pregnant women aged 15–49 suffer from anemia. Insufficient availability of nourishing food for women in Bihar contributes to their relatively low body mass index (BMI) and severe illnesses of anemia. Distributive inequality in food and nutrition security at the household level is unequivocally demonstrated, even in cases where women assume greater labor responsibilities within the family (Parthasarthy and Choudhary 2007).

An analysis of deliveries categorized by the wealth index in India during 2005–06 reveals that 26% of women from affluent families opt for caesarean section, compared to only 1.5% of women from poorer homes. The statistics also demonstrate the continuous trend of privatization and commercialization of medical facilities (Ghosh 2010). UNICEF (2023) reported that, 30% of women aged 15-49 worldwide are affected by anemia, and 10% of women aged 20-49 are underweight. Overweight is impacting about 35% of women aged 20-49 years, with 13% classified as obese. A study by Mallikharjun Rao & Kodavanti et al. (2010) found that cultural norms, household practices, and socio-economic factors influence women's nutritional status, leading to insufficient dietary intake and micronutrient deficiency during pregnancy and lactation. Tribal women had a higher frequency of goiter at 4.9% compared to rural women at 0.8%.

### OBJECTIVE OF THE STUDY

The major objective of the study is to examine the nutritional, maternal and reproductive health status of women in India and in the selected states under the category of rural and urban areas.

### METHOD

The study is based on the analysis of secondary data collected from various sources such as National Family Health Survey 4 & 5, Press Information Bureau Government of India and Ministry of Statistics & Programme Implementation Govt. of India, Annual Reports of MHRD, Ministry of Health and Family Welfare, Government of India. The paper uses the indicators i.e. Literacy rate, TFR, malnutrition, obesity, use of family planning method and prevalence of anaemia among women, selected indicators of reproductive health. In addition to the usual statistical measures average and percentage are applied.

### Health and Nutritional Status of Women in India

According to the National Family Health Survey (NFHS) – 4 conducted by the Ministry of Health and Family Welfare in 2015-16, 22.9% of women aged 15-49 are underweight, with a BMI less than 18.5 kg/m<sup>2</sup>. The states with the greatest proportion of malnutrition among women include Jharkhand (31.5%), Bihar (30.4%), Dadra and Nagar Haveli (28.7%), Madhya Pradesh (28.4%), Gujarat (27.2%), and Rajasthan with 27% (Govt. 2020). Society overlooks the importance of women's improved health for the overall well-being of society (Shama and Pinaki, 2018). India was placed 132nd on the Gender Development Index (GDI) for the year 2020. India accounts for 33% of the worldwide undernutrition burden. India was placed 101 out of 116 countries on the 2021 Global Hunger Index, with a score of 27.5, a decrease from its 94th position in 2020. The comparison between National Family Health Surveys 4 and 5 highlights various trends and changes in important variables, offering insight into the evolving landscape of women's health and nutrition.

**Table 1: Scenario of Health and Nutritional Status of Women (15-49 years) in India**

Indicators	NFHS 4			NFHS 5		
	Rural	Urban	Total	Rural	Urban	Total
Literate Women (%)	61.5	81.4	68.4	65.9	83.0	71.5
Total Fertility Rate (%)	2.4	1.8	2.2	2.1	1.6	2.0
Institutional Births (%)	75.1	88.7	78.9	86.7	93.8	88.6
Malnutrition (BMI<18.5kg/m <sup>2</sup> )	26.7	15.5	22.9	21.2	13.2	18.7
Obese or overweight (BMI≥25.0 kg/m <sup>2</sup> )	15.0	31.3	20.7	19.7	33.2	24.0
Anaemia	54.2	50.8	53.0	58.5	53.8	57.0

Source: NFHS 4 & 5

Women's literacy is a crucial sign of their overall growth in health and nutrition. NFHS 5 demonstrates improvement compared to NFHS 4, increasing from 68.4% to 71.0%. Comparing the malnutrition levels of women aged 15 to 49 between NFHS-4 and NFHS-5 reveals a decrease from 22.9% to 18.7%, indicating an improvement in nutritional status and public health interventions. Conversely, the percentage of overweight or obese women (BMI  $\geq$  25.0 kg/m<sup>2</sup>) increased from 20.6% to 24.0% during the two surveys, indicating changes in their living patterns. Anemia prevalence among women in India has risen from 53.1% to 57% over the past four years.

Recent breakthroughs in population control measures have led to improved women's health in India. The Total Fertility Rate (TFR), which represents the average number of children per woman, has reduced from 2.2% to 2.0% during NFHS 4 and 5 at the national level. Bihar and Jharkhand are two of the only five states with fertility rates above the replacement level. The percentage of institutional births in India has risen notably from 78.9% to 88.6%. Around 87% of births in rural areas and almost 94% in metropolitan areas are delivered in institutions, indicating greater access to healthcare facilities. The Overall Contraceptive Prevalence Rate has significantly grown from 53.5% to 66.7%, indicating advancement in family planning awareness and health.

### Status of the Utilisation of Maternal Health Services

Among the women's health role of maternal health is similarly considered as an important part of reproductive health. Under this antenatal check-up, protection against neonatal tetanus, consumption of folic acid tablet, MCP card and postnatal care are included.

**Table: 2 Status of the Utilisation of Maternal Health Services in India (in %)**

Indicators	India	Jharkhand	Bihar
Mothers who had an antenatal check-up in the first trimester (%)	70.0	68.0	52.9
Mothers who have at least 4 antenatal care visits (%)	58.1	38.6	25.2
Mothers whose last birth was protected against neonatal tetanus (%)	92.0	90.8	89.5
Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	44.1	28.2	18.0
Mothers who consumed iron folic acid for 180 days or more when they were pregnant (%)	26.0	14.9	9.3
Registered pregnancies for which the mother received a mother and child protection (MCP) card (%)	95.9	91.5	89.5
Mothers who received postnatal care from a doctor/nurse/LHV/ANM/ midwife/other health personnel within 2 days of delivery (%)	78.0	69.1	57.3

Source- NFHS-5

The above mentioned table it is clear that in India, 70 % women had an antenatal check-up in the first trimester while Jharkhand had 68.0% and Bihar had the least and had 51.9%, Mothers 58.1% mothers had at least 4 antenatal care visits at national level among the two selected states the performance of Bihar is poor as only 25% mothers are being benefited by this service, Mothers whose last birth was protected against neonatal tetanus at all states average is 92.0% and stands just equal to national average in both Bihar and Jharkhand states. As per the NFSH-5 data only 18% mothers had consumed iron folic acid for 100 days or more when they were pregnant, the figure is more than half of the national average of 44.1%. only 9.3% women are getting iron folic acid for 180 days or more when they were pregnant whereas in Jharkhand 14.9% have received the benefit. There is significant improvement is reported in registered pregnancies for which the mother received a mother and child protection (MCP) card at both the national and selected states levels as more than 90% are covered under this card. Mothers who received postnatal care from a doctor/nurse/LHV/ANM/ midwife/other health personnel within 2 days of delivery at national average is 78.0% while in Jharkhand it is 69.1% and Bihar it is lowest and is reported only 57.3%.

### Status of Total Fertility Rate

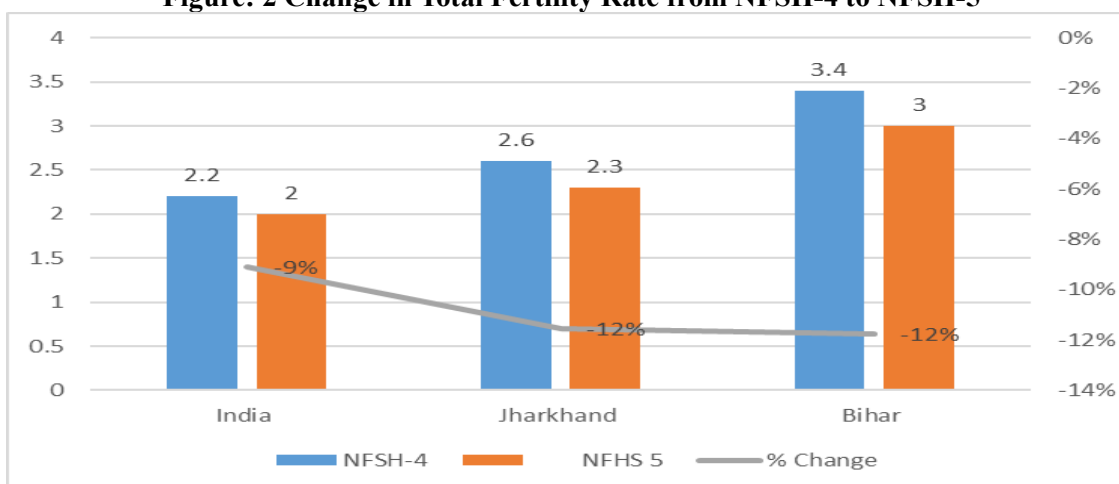
The total fertility rate is the mean number of offspring born to women over their lifespan. The primary factor influencing women's progress, leading to their socio-economic advancement.

**Table: 3 Status of Total Fertility Rate**

	NFHS 4			NFHS 5		
	Urban	Rural	Total	Urban	Rural	Total
India	1.8	2.4	2.2	1.6	2.1	2
Jharkhand	1.8	2.8	2.6	1.6	2.5	2.3
Bihar	2.4	3.6	3.4	2.4	3.1	3.0

Source: NFHS-4 &amp; 5

It is clear from the table that total fertility rate has shown a declining trend in India, Jharkhand and Bihar, which shows that now women are more self-aware about their health, has better healthcare facilities leading to delayed marriage and family planning. Jharkhand has shown better performance with 2.3% than Bihar (3%) when compared to national average of 2% in 2019-21.

**Figure: 2 Change in Total Fertility Rate from NFHS-4 to NFHS-5**

Source: NFHS 4 &amp; 5, Ministry of Health &amp; Family Welfare, Govt. of India

It is evident from the figure that the performance of Bihar is poor and is lagging behind the Jharkhand as well as the national average. As far as improvements from NFHS-4 to NFHS-5 is concerned at national level the TFR is decreased by 9% and in Bihar & Jharkhand it is reduced by 12%.

### Status of Utilisation of Delivery Care Services

Under the utilisation of delivery care services there are three major components- Institutional Births, Births attended by skilled health personnels and Births by C-Section. Table-4 provides the details of the current status of these services by using the NFHS data 209-20.

**Table: 4 Current Status of the Utilisation of Delivery Care Services (in%)**

Indicators	India	Jharkhand	Bihar
Institutional births (%)	88.6	75.8	76.2
Institutional births in public facility (%)	61.9	56.8	56.9
Births attended by skilled health personnel (%)	89.4	82.5	79.0
Births delivered by caesarean section (%)	21.5	12.8	9.7
Births in a private health facility that were delivered by caesarean section (%)	47.4	46.7	39.6
Births in a public health facility that were delivered by caesarean section (%)	14.3	7.0	3.6

Source- NFHS-5.

There has been a significant improvement recorded at both the national and state levels, according to the most recent data NFHS; more than 88 % of births has taken place in institutions, however in Jharkhand 75.8 % and in Bihar 76.2%; among this 61.9%, 56.8% and 56.9% have taken place in public facility respectively in India, Jharkhand and Bihar. In case of C-Section deliveries only 9.7% are recorded while at national level this figure stood at 21.5%. In Bihar, a considerable number of newborns were being delivered by caesarean section. In 2015-16, around 6.2% of all babies were delivered by caesarean section, a percentage that rose to 9.7% by 2019-20. In 2019-20, a much larger proportion of caesarean section deliveries (39.6%) occurred in private health institutions compared to public health facilities (3.6%). More than 45% C-Section deliveries are performed by the private hospitals. Pregnant women are compelled to seek care at private healthcare facilities due to inadequate health infrastructure at public healthcare facilities. This results in increased costs for caesarean sections and an upward trend in the average out-of-pocket expenditure (OOPE) per delivery.

### Inter-state Status of Institutional Births

India began offering incentives for institutional deliveries to promote safe childbirths. It refers to giving birth in a medical facility while being closely supervised by qualified medical professionals. According to the NFHS 5, the percentage of institutional deliveries in India rose from 78.9% in 2015-16 to 88.6% in 2019-20.

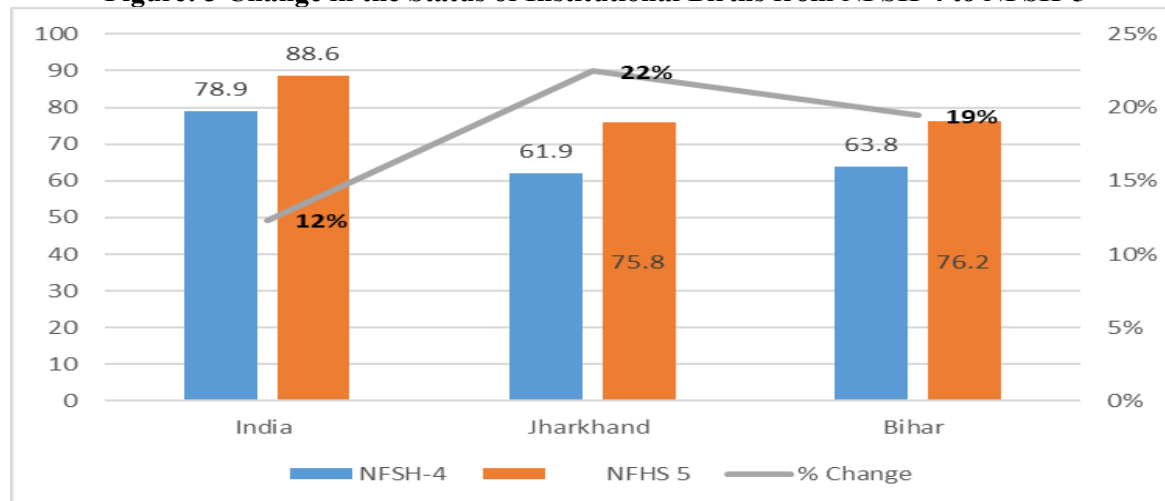
**Table: 5 Inter-state Status of Institutional Births**

	NFHS 4			NFHS 5		
	Urban	Rural	Total	Urban	Rural	Total
India	88.7	75.1	78.9	93.8	86.7	88.6
Jharkhand	81.5	57.3	61.9	89.1	73.1	75.8
Bihar	74.3	62.6	63.8	84.1	75	76.2

Source: NFHS 4 & 5, Ministry of Health & Family Welfare, Govt. of India

The table above indicates that the percentage of institutional births in both states has increased by more than 10% during the last five years. In terms of the national average (88.6%), both states continue to trail behind, although Bihar outperforms with 76.2%, while Jharkhand is not far behind at 75.8%.

**Figure: 3 Change in the Status of Institutional Births from NFHS-4 to NFHS-5**



Source: NFHS 4 & 5, Ministry of Health & Family Welfare, Govt. of India

It is clear from the figure that highest (22%) improvement is reported in Jharkhand as the institutional births have reached to the level of 75.8% from 61.9% while at national level it has improved by 12% and in Bihar by 19%.

### Status of Use of Contraceptives

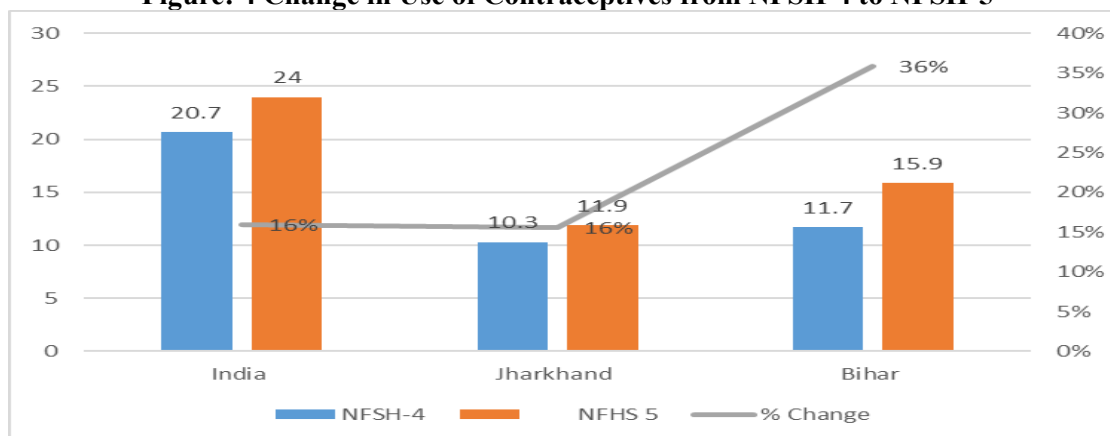
Contraceptives are a crucial strategy for family planning. Several studies indicate that the rise in contraceptive usage has led to a 40% decrease in maternal fatalities in the last two decades, mostly by lowering the rate of unintended births. The below presented table provides the information about the use of contraceptives in both states and also highlights the rural-urban gap.

**Table: 6 Status of the Use of Contraceptives**

	NFHS 4			NFHS 5		
	Urban	Rural	Total	Urban	Rural	Total
India	31.3	15	20.7	33.2	19.7	24
Jharkhand	21.07	5.9	10.3	21.6	8.6	11.9
Bihar	23.5	9.7	11.7	25.2	14.2	15.9

Source: NFHS 4 & 5, Ministry of Health & Family Welfare, Govt. of India

It is apparent from the above table that use of contraceptives has increased from 2015-16 to 2019-20. Bihar has seen a great change from NFHS 4 TO 5 but when compare to national average of 24%, Jharkhand (11.9%) is lagging behind Bihar (15.9%). There is also an improvement in urban and rural areas of both the state in five years which shows the better educational attainment and awareness among the individuals. In Jharkhand there is huge Rural-urban gap as only 8.6% are using contraceptives. In this indicator the performance of Bihar is better than Jharkhand state.

**Figure: 4 Change in Use of Contraceptives from NFSH-4 to NFSH-5**

Source: NFHS 4 & 5, Ministry of Health & Family Welfare, Govt. of India

Figure- 4 provides the details of change in use of contraceptives from NFSH-4 to NFSH-5 in India as well as in the states of Bihar & Jharkhand. Figure is also reflecting the effectiveness of government programmes for family planning in India; as the result of government initiatives India has reported 16% improvement over the las five years whereas Bihar has recoded robust increase by 36% during the same period.

### Status of Malnutrition Among Women

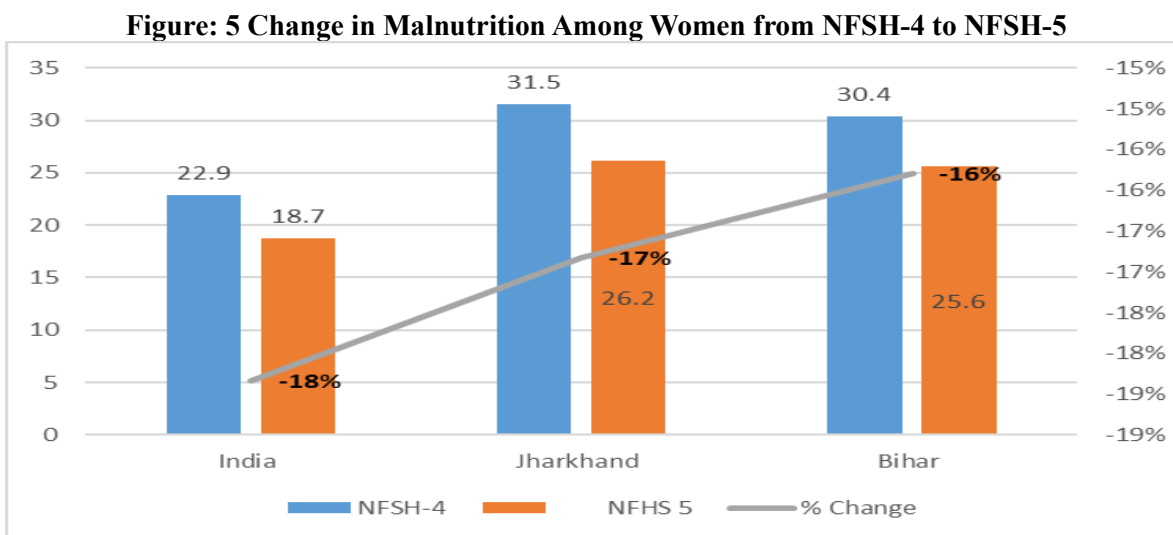
Under this section to analyse the status of malnutrition among women the percentage of women whose Body Mass Index (BMI) is below normal (BMI <18.5 kg/m<sup>2</sup>) is used. It is well recognized that nutrient-rich foods are necessary for maintaining a healthy body and mind. Mothers consuming nutritious meals will result in the delivery of a healthy kid, positively impacting the child's development.

**Table: 7 Status of Malnutrition Among Women**

	NFHS 4			NFHS 5		
	Urban	Rural	Total	Urban	Rural	Total
India	15.5	26.7	22.9	13.2	21.2	18.7
Jharkhand	21.6	35.4	31.5	17.3	29.2	26.2
Bihar	22.3	31.8	30.4	18.7	26.9	25.6

Source: NFHS 4 & 5, Ministry of Health & Family Welfare, Govt. of India

The preceding table makes it evident that throughout the past five years, India's percentage of malnutrition, defined as BMI less than 18kg/m<sup>2</sup> has dropped from 22.9% to 18.7%. Both Jharkhand and Bihar have shown an improvement in the status of malnourished women when compared from NFHS 4 to 5 data showing a decrease of 16.80% and 15.78% respectively. In terms of total malnutrition among women Jharkhand is lagging behind Bihar by just 0.6 percent points but in terms of rural areas Jharkhand is lagging behind by 2.3 percent points. As per the NFSH-5 highest rural-urban gap is reported in Jharkhand (11.9%).



Source: NFHS 4 & 5

figure-5 calculates and present the percent change in malnutrition prevailing among women from NFSH-4 to NFSH-5 in Bihar and Jharkhand. Jharkhand is best performer than Bihar as 17% reduction is reported from NFSH-4 to 5; at all India level total malnutrition is reduced by 18%.

**PREVALENCE OF ANAEMIA AMONG WOMEN**

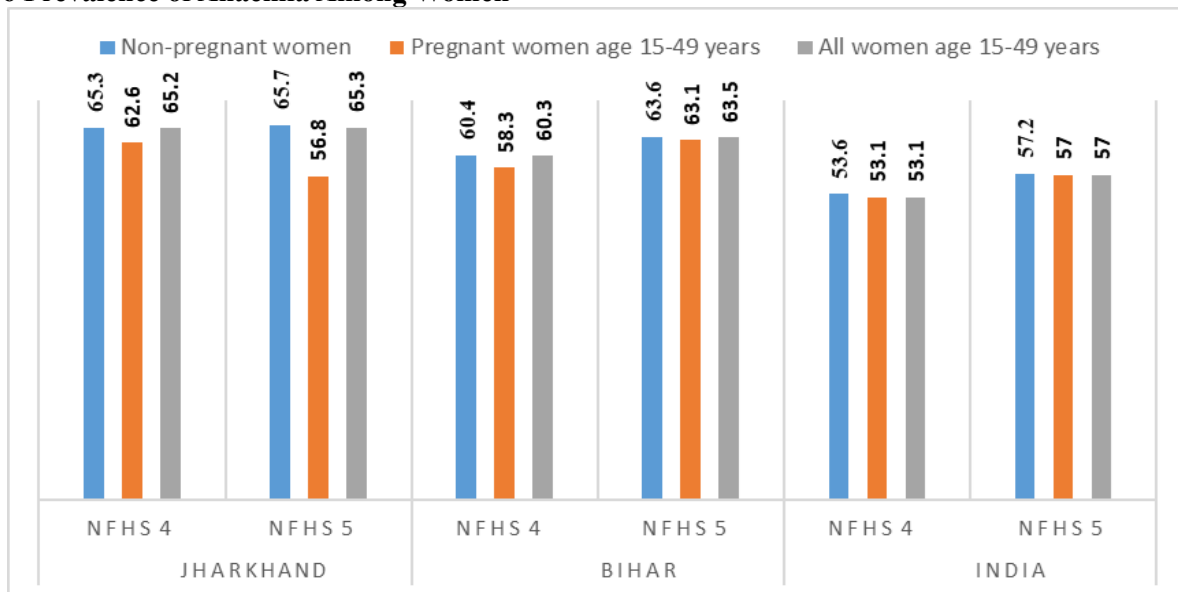
The National Family Health Survey 5 (2019-21) reveals that the incidence of anemia among males aged 15-49 is 25.0%, while among females aged 15-49, it is 57.0%. The prevalence is as follows: 31.1% among male adolescents aged 15–19, 59.1% among female adolescents, 52.2% among expectant women aged 15–49, and 67.1% among infants aged 6-59 months (Govt. of India 2022). Our nation should be more concerned about the prevalence of anaemia among women as the problem is creating multidimensions adverse effects in the prosses of economic and social development of entire country. A woman is considered anaemic if her haemoglobin (Hb) level is less than 12g/dl, according to the World Health Organization.

**Table: 8 Status of Anaemia Among Women**

	Jharkhand		Bihar		India	
	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5
Non-pregnant women	65.3	65.7	60.4	63.6	53.6	57.2
Pregnant women age 15-49 years	62.6	56.8	58.3	63.1	53.1	57
All women age 15-49 years	65.2	65.3	60.3	63.5	53.1	57

Source: NFHS 4 & 5, Ministry of Health & Family Welfare, Govt. of India



**Figure: 6 Prevalence of Anaemia Among Women**

Source: NFHS 4 &amp; 5

The aforementioned table and figure illustrate the patterns in the prevalence of anaemia in Jharkhand and Bihar in respect to national average. There is an increase in the percentage of anaemic women in India and is increased from 53.6% to 57.2% in NFHS-5; there is an increase reported in all the three indicators from the year 2015-16 to 2019-20 at national level. Jharkhand is the only state that has seen improvement among pregnant women aged 15-49, with a decrease of 9.26%. Anemia rates in Bihar have risen by 4.96%, 8.23%, and 5.3% among non-pregnant, pregnant, and all women, respectively.

### Conclusion

This study aimed to examine the health and nutritional status of women residing in the states of Jharkhand and Bihar. We took into account a few chosen indicators of women's health and nutrition from the NFHS's fourth and fifth data rounds in order to achieve this goal. In terms of anaemia, contraceptive use, fertility rate, utilisation of maternal & delivery care services. On the basis of the analysis of selected indicators we have found that Jharkhand is performing better than Bihar. It was found that both states had seen improvements in the selected indicators except in the prevalence of anemia at national level and at Bihar state level. There is the need of improvement for in implementation of policies and programmes by the government and awareness among every individual for the attainment of desired results with the timeframe.

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