
An Analysis of Nutritional Status of Women in India: A Study of NFHS-4

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ABSTRACT

One of the most significant challenges facing humanity is to eliminate hunger and malnutrition. The conditions of malnutrition and other diseases associated with it are mainly caused by consuming too much of food, consuming too little food, or consuming an unbalanced diet that is devoid of essential nutrients required by the body. Adequate nutritional attainment has a pivotal role in human well-being, especially for women because it has serious implications for the health of their children. The present paper is an attempt to analyze the level of malnutrition among women in India. An inter-state comparison has also been made pertaining to women's malnutrition. It also investigates into inter sector (i.e. rural-urban), social and economic inequalities pertaining to malnutrition among women in India. These issues have been addressed by analyzing the National Family Health Survey- (NFHS-4) data, 2015-16. It is essential to express, at the start, that the current paper has a constrained extension as it presents a fundamental factsheet on women's lack of healthy sustenance in India and doesn't give a clarification or talk about the reasons for the current degrees of ailing health among women in India.

Keywords: Women's Malnutrition, inter-state disparities, social inequalities, economic inequalities

1. INTRODUCTION

One of the most significant challenges facing humanity is to eliminate hunger and malnutrition [1]. The conditions of malnutrition and other diseases associated with it are mainly caused by consuming too much of food, consuming too little food, or consuming an unbalanced diet that is devoid of essential nutrients required by the body. In India, out of the total population of 1.3 billion people, around 600 million constitute women. Women in India are quite oppressed, primarily because of societal and cultural forces, and consequently they have less access to various resources like food, health care, community support and information. In order to empower them cultural, political and economic actualities of the society must be dealt with [2].

Adequate nutritional attainment has a pivotal role in human well-being, especially for women because it has serious implications for the health of their children. A women's under nutrition would mean destitution of the primary aspect of prosperity; the absence of opportunity to have a healthy existence. The malnutrition of women has numerous and cumulative association with human development. For example, maternal lack of healthy sustenance raises the danger of maternal mortality. Maternal short height and iron insufficiency weakness, which increment the danger of death of mother at delivery represent at any rate 20 percent of

maternal mortality[3]. Furthermore, maternal malnutrition encroaches altogether on significant and interconnected viewpoints as intrauterine development impediment, child malnutrition and rise of chronic illnesses [4][5]. Women encounter multiple forms of malnutrition and in India, a third of women of reproductive age (between 15 to 49 years) have a body mass index (BMI) of less than 18.5 and hence are undernourished. Approximately half (51.4 percent) of the women in reproductive age are inflicted with anaemia. And alarmingly, one in five (22 percent of) adult women in India are obese. Therefore, a study of the nutritional attainment of women assumes significance and relevance.

The present paper is an attempt to analyze the level of malnutrition among women in India. An inter-state comparison has also been made pertaining to women's malnutrition. It also investigates into inter sector (i.e. rural-urban), social and economic inequalities pertaining to malnutrition among women in India. These issues have been addressed by analyzing the National Family Health Survey- (NFHS-4) data, 2015-16. It is critical to verbalize, at the start, that the current paper has a constrained degree as it presents a fundamental factsheet on women's lack of healthy sustenance in India and doesn't give a clarification or talk about the foundations for the current degrees of ailing health among women in India.

In any case, as a matter of first importance, it is critical to determine the markers of sustenance utilized here. The body mass index (BMI) quantifies the weight to squared stature and a BMI of under 18.5 shows undernutrition, alluded to as chronic energy deficiency (CED). Despite what might be expected, BMI over 25 and 30 alludes to overweight and obesity respectively, which are likewise characteristic of helpless sustenance. CED prevents a person's chance to have a solid existence, and obesity really identifies with an undesirable way of life. Anaemia is one of the far reaching types of women's malnutrition in developing nations and is demonstrated as a rule by 11.9 grams/decilitre of hemoglobin in the blood. Hemoglobin beneath 9.0 and 7.0 grams/decilitre indicates moderate and severe anaemia respectively[6].

Table 1 provides information about the level of malnutrition among women (15-49 years) in India during 2015-16. The data reveals that in India more than one-fifth of women suffer from chronic energy deficiency (CED) and also around 20 per cent of women are overweight or obese. CED is observed to be a more dominant form of malnutrition in rural India where around 27 per cent of women are affected by it, while in urban India, the proportion is around 11 percentage points lower. On the contrary obesity is seemingly a serious nutritional problem in urban India, where around one-third women are obese, which is quite high a figure as compared to the rural counterpart. Iron deficiency anemia is also observed to be a widespread form of malnutrition in India, as around 50 percent of women are anaemic. Also, the table reflects that unlike in case of CED and obesity, where the disparity between rural and urban region is significantly large, such disparity is relatively lower in case of anaemia.

Table 1:
Malnutrition among Women in India(15-49 Years) (2015-16)
(in percentage)

BMI	Rural	Urban	All India
CED	26.7	15.5	22.9
Overweight or Obese	15.0	31.3	20.6
Anaemic	52.2	45.8	50.4

Source: Computed from NFHS-4

Table 2:
Malnutrition among Women in India, by Age and Marital Status (2015-16)
(in percentage)

Age/ Marital Status	BMI		Anaemic	
	CED	Overweight or Obese	Moderate or Severe	Any
15-19	41.9	4.2	12.9	54.1
20-29	25.3	14.2	13.9	53.1
30-39	15.7	27.7	13.2	52.5
40-49	13.7	33.8	13.6	53.0
Marital Status				
Never Married	37.4	6.6	12.3	52.5
Currently Married	18.4	25.0	13.6	53.1
Widowed	18.0	26.5	16.1	56.6
Divorced/Separated/Deserted	20.1	22.7	16.1	54.4

Source: Computed from NFHS-4

Considering women belonging to the age group of 15-49 years, into account as a composite group may not bring to light the disparities in the prevalence of infliction of malnutrition across women with different age groups and different marital status. Women in different age groups and with different marital status face diverse social and economic conditions so it is important to study the level of malnutrition among women from this angle. The level of malnutrition among women in India, by age and marital status, has been presented in Table 2. It highlights that CED persists as a dominant form of malnutrition among women in 15-19 years age group affecting around 42 per cent of women, while women in the age group of 40-49 years are least affected by it. Conversely, obesity is most dominant among women belonging to the older age group (40-49 years) affecting around 34 per cent women while only 4.2 per cent women belonging to the age group of 15-19 years is obese, thus, indicating that the incidence of obesity increases with progression in age and the opposite holds good for CED. On observing, the women facing anaemia, it is seen that women in all age groups

are anaemic in one form or another. Also, this indicates anaemia to be quite widespread as around 50 per cent of women are anaemic.

Further, women's malnutrition as per their marital status, indicates that the extent of CED is greater among never married women (37.4 per cent), while it is quite low comparatively for married, widowed, divorced/ separated/deserted women. On further observation, it is found that the incidence of obesity is least for never married women (6.6 per cent), and it is quite high comparatively for married, widowed, divorced/ separated/deserted women (more than 20 per cent in each case). Contrariwise, marital status does not seem to have much effect on the incidence of being anaemic as not much difference has been observed, in the incidence of anaemia with respect to the marital status of the women, though it reveals that the proportion of anaemic women is quite high (more than 50 per cent) irrespective of the marital status.

The disparities in women's malnutrition observed earlier persuade us to look at other types of divergence as well, primarily social and economic. Table 3 represents women's malnutrition in India based on social and economic groups for the period 2015-16. It reveals that women belonging to scheduled tribe are the ones who are most inflicted with CED i.e. 31.7 per cent, followed by those belonging to scheduled caste(25.3 per cent), other backward classes (22.9 per cent) and others (17.8 per cent). Further, it is noticed that women belonging to the group categorized as other are most inflicted with obesity (26.9 per cent), followed by other backward classes (20.8 per cent), scheduled caste(17.2 per cent) and scheduled tribe(10.2 per cent).The observation of data pertaining to anaemia among women belonging to different social groups, conveys a really dismal picture of poor nutrition among women belonging to these groups owing to such high fraction of women being inflicted with anaemia, which is higher than 50 per cent for each group and is maximum for women belonging to scheduled tribe (59.9 per cent). Although, an insignificant gap is noticed among different social groups.

Table 3:
Malnutrition among Women in India, by Social and Economic Groups, (2015-16)
(in percentage)

Social Groups/ Wealth Groups	BMI		Anaemic	
	CED	Overweight or Obese	Moderate Severe	or Any
Scheduled Caste	25.3	17.2	15.1	55.9
Scheduled Tribe	31.7	10.2	16.2	59.9
Other Backward Classes	22.9	20.8	13.3	52.2
Others	17.8	26.9	11.3	49.8
Don't Know	26.1	20.2	16.6	55.0
Wealth Groups				
Lowest	35.8	5.8	15.4	58.7
Second	29.5	11.4	14.3	55.1

Middle	23.1	7	18.	14.2	53.3
Fourth	17.1	2	28.	12.9	51.0
Highest	11.6	2	36.	10.7	48.2

Source: Computed from NFHS-4

The level of malnutrition among different wealth groups brings to light that the least infliction of CED has been observed for the highest quintile group (11.6 per cent) and is maximum for lowest quintile group (35.8 per cent). Further, in case of obesity, the women belonging to the highest quintile group accounted for the highest infliction (36.2 per cent) while those belonging to the lowest income group recorded the least infliction of obesity (5.8 per cent). The incidence of anaemia does not deviate much between various wealth groups. Alarmingly, more than 50 per cent of women across all wealth groups suffer from anaemia (except for highest quintile group). It also affirms that incidence of anaemia reduces with a rise in wealth status. It can also not be overlooked that a very high proportion of women falling in the highest quintile group also are inflicted with anaemia (48.2 per cent). Thus, it suggests that a very high percentage of Indian women are inflicted with malnutrition irrespective of their wealth status.

The data in Table 4 brings out the information on malnutrition of women in major states of India. It reveals that the incidence of CED is maximum in the state of Jharkhand (31.6 per cent), followed by Madhya Pradesh (28.4 per cent), Gujarat (27.2 per cent), Rajasthan (27 per cent), Chhattisgarh (26.7 per cent) and Odisha (26.5 per cent), while the states at the lower end of the spectrum are Kerala (9.7 per cent), Punjab (11.7 per cent), Tamil Nadu (14.6 per cent) but conversely, on noticing the extent of obesity in these three states it has been seen that these states are nearly at the top ladder in obesity where in Kerala maximum women are obese (32.4 per cent), followed by Andhra Pradesh (32.2 per cent), Punjab (31.3 per cent) and Tamil Nadu (30.9 per cent). Overall these figures are very disquieting because it brings to light that around 50 per cent of women in all these states are inflicted with malnutrition of one form or the other. The inter-state comparison of these states regarding infliction of women with anaemia also portrays a very grim picture, where the worst hit states are Jharkhand (65.2 per cent), Haryana (62.7 per cent), West Bengal (62.5 per cent), Bihar (60.3 per cent) and Andhra Pradesh (60 per cent). The proportion of anaemic women is comparatively low in the states of Kerala, Uttarakhand and Karnataka [7].

Table 4:
Malnutrition among Women across Major States of India, (2015-16)
(in percentage)

States	BMI		Anaemic	
	CED	Overweight or Obese	Moderate or Severe	Any
Andhra Pradesh	17.6	32.2	20.4	60.0
Assam	25.7	13.2	8.90	46.0
Bihar	30.5	11.	14.6	60.3

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Chhattisgarh	26.7	9	11.	9.2	47.0
Gujarat	27.2	8	23.	13.6	54.9
Haryana	15.8	0	21.	19.8	62.7
Jharkhand	31.6	3	10.	16.1	65.2
Karnataka	20.8	3	23.	11.8	44.8
Kerala	9.7	4	32.	4.7	34.3
Madhya Pradesh	28.4	6	13.	13.3	51.0
Maharashtra	23.5	4	23.	11.0	48.0
Odisha	26.5	5	16.	10.5	52.5
Punjab	11.7	3	31.	11.3	53.5
Rajasthan	27	1	14.	12.2	46.8
Tamil Nadu	14.6	9	30.	15.4	55.0
Uttarakhand	18.4	5	20.	10.7	45.2
Uttar Pradesh	25.3	5	16.	13.6	52.4
West Bengal	21.3	9	19.	13.6	62.5
India	22.9	7	20.	13.4	53.1

2. CONCLUSION

The present study highlights a very distressing picture of women's level of nutrition and consequently brings to fore many significant issues. CED is a more dominant form of malnutrition in rural India while in urban India obesity is more serious nutritional problem. Further, more than 50 percent of women in India are anaemic, though the incidence is greater in rural areas. The level of malnutrition among women across major states in India reveals that the incidence of CED is maximum in the state of Jharkhand and least in Kerala. The incidence of obesity is maximum in Kerala, Andhra Pradesh, Punjab and Tamil Nadu. An age-wise analysis of malnutrition suggests that the incidence of obesity increases with progression in age and opposite holds good for CED. On observing, the women facing anaemia, it is seen that women in all age groups are anaemic in one form or another. The states under study indicate really high levels of anaemic women too.

The incidence of CED is observed to be maximum among never married and the incidence of obesity is least for them. The marital status does not seem to have much effect on the incidence of being anaemic. The level of malnutrition reflect huge gaps among different social groups. The incidence of malnutrition reduces with the rise in so-called social status. Also, it has been noticed that malnutrition among women descends with growth in wealth status. The magnitude of women inflicted with anaemia is quite high for each wealth group.

The above analysis reveals that the problem of malnutrition in India is quite relentless. The deprivation of women with regard to nutrition and health care has serious repercussions on the community in the form of conferring the coming generations (whether male or female) with various diseases and other conditions not conducive to health (Osmani and Sen, 2003). Also, it has serious ramifications for human development which are huge and cumulative. Therefore it is important that malnutrition among women is interpreted as an issue of human development.

In order to empower women and girls to ameliorate their position in society and make the best of their capacities, they must be provided adequate nutrition because poor nutrition among women might cause impediments for them, hindering their ability to fully participate in society. Recognizing the importance of women's nutrition, this has now been incorporated as a special part in UNICEF India's nutrition programme which aims at universalizing of the five essential nutrition interventions for women that have been decided upon after attaining national and global consensus.

Following are the five basic sustenance mediations for women:

1. Facilitating ladies with arrangements like early enrollment of pregnancy and nature of antenatal test, with accentuation on pregnancy weight gain checking, screening and unique consideration of in danger moms, and along these lines, improve ladies' entrance to essential sustenance and wellbeing administrations.
2. Enabling ladies to hinder pregnancies too soon, again and again and excessively near one another.
3. Administering the Iron Folic Acid Supplementation, deworming, Pre and peri-conceptual folic acid supplementation, Universal access to iodized salt, Malaria prevention and treatment in malaria-endemic areas, maternal calcium supplementation, maternal vitamin A supplementation so as to prevent micronutrient deficiencies and anemia.
4. Developing facilities like access to water and sterilization and cleanliness training (counting menstrual cleanliness).
5. For upgrading the amount and sustenance level of food expended spotlight would be laid on creating access summed up family unit food proportion through public distribution system. Ladies would likewise be bestowed nourishment proficiency so as to improve the eating regimen and subsequently the sustenance levels.

By temperance of the national-wide dispatch of the POSHAN Abhiyaan 2018-20, women's sustenance obtained prime core interest. The Ministry of Health and Family Welfare got full help from UNICEF in conceptualizing and meeting for the improvement of Anemia Mukta Bharat (Anemia Free India). The Initiative got national honor and now is being scaled-up

nation wide in a staged way as National Rural Livelihood Mission Contribution to POSHAN Abhiyaan.

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