



Causes of Undernourishment: A Field Study in Rural India

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Abstract

India, the 7th largest country draws the limelight for its pluralistic, multilingual and multi-ethnic society. Ironically it also claimed its position for bringing forth a very immense number of malnourished children. Malnutrition is a condition where the body is deprived of minimum daily nourishment. India is ranked second in having malnourished children. There is a myth that the Indian children are well nourished than the children in Africa, but the latest statistics by the WHO and UNICEF proves it untrue. The average rate of malnourishment in Sub-Saharan Africa is 30 whereas in India it is 37 percent. In spite of the many programs hosted by the government, 47 percent of the children under the age of 3 years are malnourished and 32 babies among 1000 born alive will not make it even to their first birthday. Based on a field survey and primary research in Bhadohi district, UP state, India, this study suggests that, some of the reasons behind this issue are gender inequality, poor education and population explosion.

Keywords: India; Kwashiorkor; Malnutrition; WHO classification

Introduction

According to WHO, Malnutrition refers to deficiencies, excess or imbalances in a person's intake of energy and/or nutrients. The term malnutrition covers 2 broad groups of conditions.

One is 'undernourishment' which includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals). The other is overweight, obesity and diet-related non-communicable diseases (such as heart disease, stroke, diabetes and cancer). According to (Singh, 2019), India accounts for 37 percent of all the malnourished children which is lower than the average of Sub-Saharan Africa: 30 percent. (Figure 1) depicts the share of each deficiency amongst Indian Children.

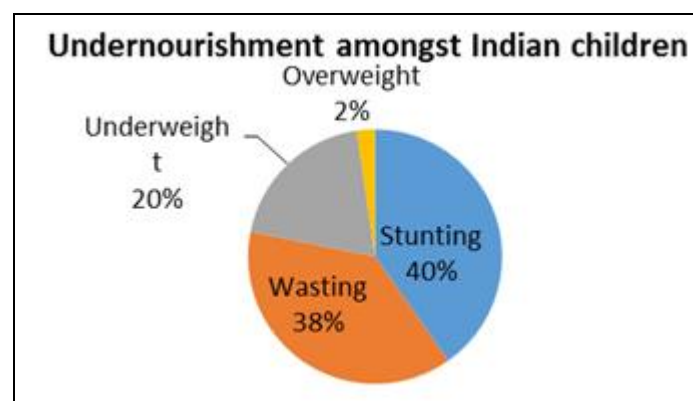


Figure 1: Undernourishment amongst Indian Children.
Source: (Bellamy, 2019)

Uttar Pradesh (UP), the most populous state in India and has some of the highest rates of malnutrition in the world. (Figure 2) shows the findings from second and third national family health surveys (NFHS 1 and 2) and compares the prevalence of stunting and wasting over 3 different years. Overall, the fig. indicates the high levels of undernourishment in UP.

According to (UNICEF, 2016), in 2014, the UP State Nutrition Mission (SNM) was established to help improve child and maternal nutrition in the state. The SNM acts as a multispectral coordinating body within the government with the objective to improve nutrition programming across sectors, especially within Integrated Child Development Services (ICDS) and the National Health Mission (NHM).

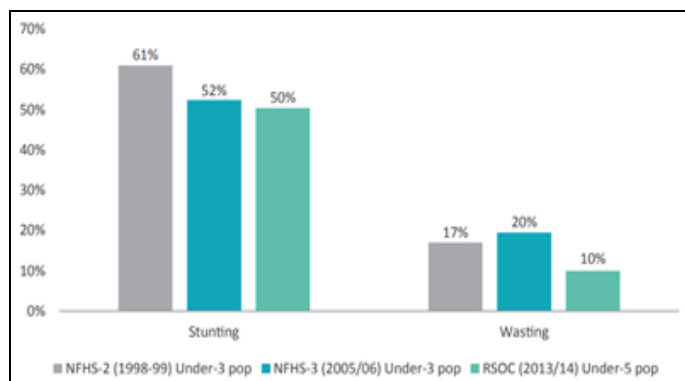


Figure 2: Nutrition Indicators in UP.

Source: (UNICEF, 2016)

The main objective of this report is to document the trends and causes of undernourishment in kids of the village Malepur, Suriyawan in the district of Bhadohi, Uttar Pradesh. The impact of government-delivered nutrition services on nutrition outcomes was not evaluated. Our paper is organized as follows: section 2 reviews the literature; section 3 explains the methodology; section 4 summarizes results and section 5 concludes.

Review of Literature

Sall (1990) uses the data collected at the pediatric unit at the CHU Hospital in Dakar to understand the relationship between nutritional factors and growth rates in Senegal. The study states main reasons for under nourishment amongst infants being: lack of education amongst mothers, poverty, special food taboos, lack of immunization and medical surveillance etc. Moreover, special foods including "Ladylac", "Ferefin" and the "rouye-complet" from Dakar's institute of food technology has had a positive impact on malnutrition.

Smith et al (2005) Identifies the factors that cause the malnutrition in urban areas to be lower than in rural areas. The article suggests that, urban and rural areas differ in terms of the social and family network, choices, employment and the

environment. These factors predominantly lead to urban areas having fewer cases of malnutrition.

Wahed et al (2017) address the issue of malnutrition in school children in a rural area of Egypt. The study analyses the data gathered from a cross sectional survey using z-scores and matches them with WHO anthroPlus indicators. The findings suggest that, in Fayoum the malnutrition level of the child is generally associated with age, gender, regularity of father's employment and the dietary factors.

Liu et al (2008) analyze the malnutrition status and the changing trends of the children under age of 5 years. The study uses multi stage cluster sampling for data collection around east, middle and west areas of China. Finally, the study concludes that, the trend in malnutrition in Chinese children is declining from the year 2003-2008. The level of decline is faster in urban areas as compared to rural areas.

Based on the literature above, we may note that there has not been any study that is field-based done in rural parts of India, which are quite undernourished. Our paper attempts to fill this gap as explained in the following sections.

Data Description and Methodology

In addition to the district/state level analysis done in this section, most of the village-level data was predominantly collected through questionnaire and interview. Residents of Malepur village, Suriyawan of Bhadohi district of Uttar Pradesh were interviewed using semi structured and unstructured interview. A total of 50 households were surveyed as part of the sample to collect relevant information.

Basic Information

The respondent's name, age, highest educational qualification and the number of dependent members on his/her arming, their food habits and other spending habits were analyzed. The selection of respondents was done randomly.

Occupational Information

The information about the time from which the respondent is engaged into the given occupation, the wages earned and the working hours, willingness to work in this industry and alternative livelihood options available was asked in the questionnaire.

Moreover, for secondary research reliable sources including: the GOI, UNICEF, National health mission were used for gathering supporting information.

The Burden of Under Nutrition

India is home to about a third of all global cases of chronic undernourishment in children. (D'Alimonte and Clift, 2017) suggests that, almost 40 percent of the country's children under the age of five exhibit stunted growth. Although, as a

whole, India's rates of under nutrition have improved significantly in recent years; rates of stunting declined from 48 to 39 per cent from 2005-06 to 2013-15 – the country still lags behind in terms of achieving the World Health Assembly's targets for stunting. Across India, there is tremendous variability in nutrition outcomes; state-level analyses are critical for understanding the complexities of under nutrition in the country. In addition to its high poverty rates, UP's under nutrition rates are among the highest in the world; there has been relatively little improvement in the past decade.

According to (Aijaz, 2017), In order to combat the issue of undernourishment, the food/agriculture related policies by the government include: Protecting the foods with appropriate nutrients (salt with iodine/iron), Promoting harvesting and consumption of affordable nutritious food, ensuring food security with higher harvesting of grains through provision of subsidies to farmers.

A glance at District of Bhadohi District Profile:

	Bhadohi	Uttar Pradesh
Rural Population (In lakhs) (Census 2011)	13.25	1551.11
Number of Districts (RHS 2014)	1	75
Number of Sub District (Tehsil/Taluka)	3	312
Number of Villages (RHS 2014)	561	106704
Number of District Hospitals (RHS 2014)	1	160
Number of Community Health Centres	5	773
Number of Primary Health Centres (RHS)	16	3497
Number of Sub Centres (RHS 2014)	160	20521

Table1: A profile of Bhadohi district

Demographic profile:

Indicator	Bhadohi	Uttar Pradesh
Total Population (In Crore) (Census 2011)	0.16	19.96
Decadal Growth (%) (Census 2001)		20.09
Crude Birth Rate (SRS 2014)	26	27.2
Crude Death Rate (SRS 2014)	7.5	7.7
Natural Growth Rate (SRS 2014)		19.5
Sex Ratio (Census 2011)	955	908
Child Sex Ratio (Census 2011)	902	899
Schedule Caste population (In Crore) (Census 2001)	0.04	3.51
Schedule Tribe population (in crore) (Census 2001)	0.0002	0.011
Total Literacy Rate (%) (Census 2011)	69.24	69.72
Male Literacy Rate (%) (Census 2011)	81.57	79.24
Female Literacy Rate (%) (Census 2011)	56	59.26

Table 2: A Demographic Profile of Bhadohi district

Village statistics of Malepur

Population – 1818 Sex Ratio – 961
Literacy (Overall) – 61.28% Male – 74.28%
Female – 48.28%
Total area – 53 hectares

Farm land – 7.4hectares

Findings

The study draws findings from a survey of 50 heterogeneous households. The findings suggest that, due to lack of awareness

during the pregnancy, the unborn child is not been provided with adequate nutrition. The main reason behind lack of care can be insufficient income. Malepur village comprises of many landless non- agricultural laborers with little income to sustain their large families. This also leads us to the issue of ineffective family planning. Due to families being large, individuals in Malepur village prefer to save the money spent on fruits and vegetables. Moreover, Out of all the malnutrition cases in Malepur, 80% of them are of growth retardation. 20% remaining cases are of Night Blindness and Tuberculosis. In 2008~2009 there used to be 15-20 new cases of malnutrition in the government hospital every month. However, this number has lowered to 1-2 cases every month in recent times. According to the respondents, the cases of malnutrition have reduced due to NRC (Nutrition rehabilitation centre), Gyanpur. A 14 day program conducted by NRC gives proper diet to the mother and the child along with some financial incentives.

Conclusions and Policy Recommendations

After analyzing the findings from data collection we have some policy recommendations to eradicate or at least reduce malnutrition in the Malepur village. Information asymmetry that is prevalent in Village Malepur should be combated, by working on greater awareness on nutrition and government programs to reduce malnutrition. Non-Profit Organizations working to improve women and child health should be taken help of. Villagers should be encouraged to consume adequate amounts of fruits and vegetables. Effective implementation of Govt. of India's various schemes like Swachh Bharat Abhiyan etc. should be ensured to combat open defecation. Villagers should be made aware of the required care to be taken during pregnancy. The individuals should be educated about family planning.

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