

## **RAMIFICATION OF NUTRITIONAL STATUS OF UNDERFIVE CHILDREN IN INDIA: NARRATIVE REVIEW**

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### **ABSTRACT:**

**The most glaring nutritional disorder in India is protein energy malnutrition. Malnutrition refers to the situation where there is an unbalanced diet in which some nutrients are in excess, lacking or wrong proportion. The aim of this review is to evaluate the prevalence of malnutrition among under five children in India. The information was collected from Google search engine, Pub med and others. The online database which was used for the search of the review was Google scholar, PubMed from the year 2009 to 2020. 5 studies were screened in the quantitative synthesis. The finding of the above reviewed studies shows that malnutrition in rural area of under five children range from 04.4 % to 70 % and in urban range from 2.78 % to 48.3 %.**

**Key words:** nutrition, under five children, urban, rural.

### **INTRODUCTION:**

World's greatest resource for healthy lives is the children of today. Today's children's are tomorrow's citizens and leaders. Children under five years constitute the most vulnerable segment of a country. Their nutritional status and mortality rate is a sensitive indicator of community health and nutrition. Globally more than half of the under-five deaths are attributable to under nutrition<sup>1</sup>.

One of the major causes for malnutrition in India is gender inequality. Due to low social status of Indian women, their diet often lacks in both quality and quantity. In India, mothers generally lack proper knowledge in feeding children.<sup>2</sup> The World Bank estimates that India is one of the highest ranking countries in the world for number of children suffering from malnutrition.

One in every three malnourished children is the world lives in India. Describing malnutrition as India's silent emergency, the World Bank report says that the rate of malnutrition cases among children in India is almost 5 times more than in China. In India around 46% of all children below the age of 3 are too small for their age, 47% are underweight and at least 16% are wasted. Many of these children are very severely malnourished. 1.3 million Children die every year in India because of malnutrition. In a shocking revelation, a government report suggests that around 48% children of the country under age of 5yrs have stunted growth, indicating that half of the children are chronically malnourished in India.<sup>3</sup>

According WHO report of 2018, 52 million children under 5 years of age are wasted, 17 million are severely wasted and 155 million are stunted, while 41 million are overweight or obese. Around 45% of deaths among children under 5 years of age are linked to under nutrition. The developmental, economic, social, and medical impacts of the global burden of malnutrition are serious and lasting, for individuals and their families, for communities and for countries. World Nearly half of all deaths in children under 5 are attributable to under nutrition; under nutrition puts children at greater risk of dying from common infections, increases the frequency and severity of such infections, and delays recovery.<sup>4</sup>

According to the Global Malnutrition Report 2020, India will miss targets for all four nutritional indicators for which there is data available. These indicators include – Stunting among under-5 children, Anaemia among women of reproductive age, Childhood overweight and Exclusive breastfeeding. According to the data available on stunting and wasting among children in the country, 37.9% of children under 5 years are stunted and 20.8% are wasted, compared to the Asia average of 22.7% and 9.4% respectively. Additionally, stunting prevalence is 10.1% higher in rural areas compared to urban areas.

A study was conducted based on possible weight loss due to the immediate food shock children may face because of the pandemic. Food shocks may lead to reduction of body weight of many children. Among them, there are many who may fall in the criteria of wasting or under-weight set by the World Health Organization (WHO). The study attempted to estimate children who can suffer from a small food shock and fall to the threshold of the malnourished category. It also provided estimates in several scenarios from bodyweight shock of 0.5-5 per cent.

The study estimates India will experience an increase of about 4,393,178 and 5,140,396 additional cases of under-weight and severe wasting respectively. The number of severe under-weight and wasted children is expected to increase by 268,767 and 166,342 respectively. Five million children are at risk of falling in the wasting category of malnourishment, while an additional two million children are at risk of being pushed into the severe wasting category, the study pointed out. Bihar, Madhya Pradesh and Uttar Pradesh will be the most affected and account for the highest share in estimated additional under-weight and wasting cases among the poorest households, said the study.<sup>5</sup>

India's war on malnutrition is being aggressively fought –with some tangible and inspiring milestones. The prevalence rate has not changed after several steps taken by govt and still need to combat malnutrition problem in our country to reduce morbidity and mortality. The present review article discusses the prevalence of under five malnourished children.

**Aim:** The aim of this review is to gather the evidence about comparison of nutritional status in rural and urban areas among under-five children.

**Objective:** To search evidence of comparison of nutritional status of rural and urban areas among under-five children.

## **METHODOLOGY:**

### **Search strategy methods**

- Pub Med, Google scholar, Medline
- From the year of 2009-2020
- Search strategy was limited to only English language

**TYPE OF THE STUDY:** - Cross sectional study,

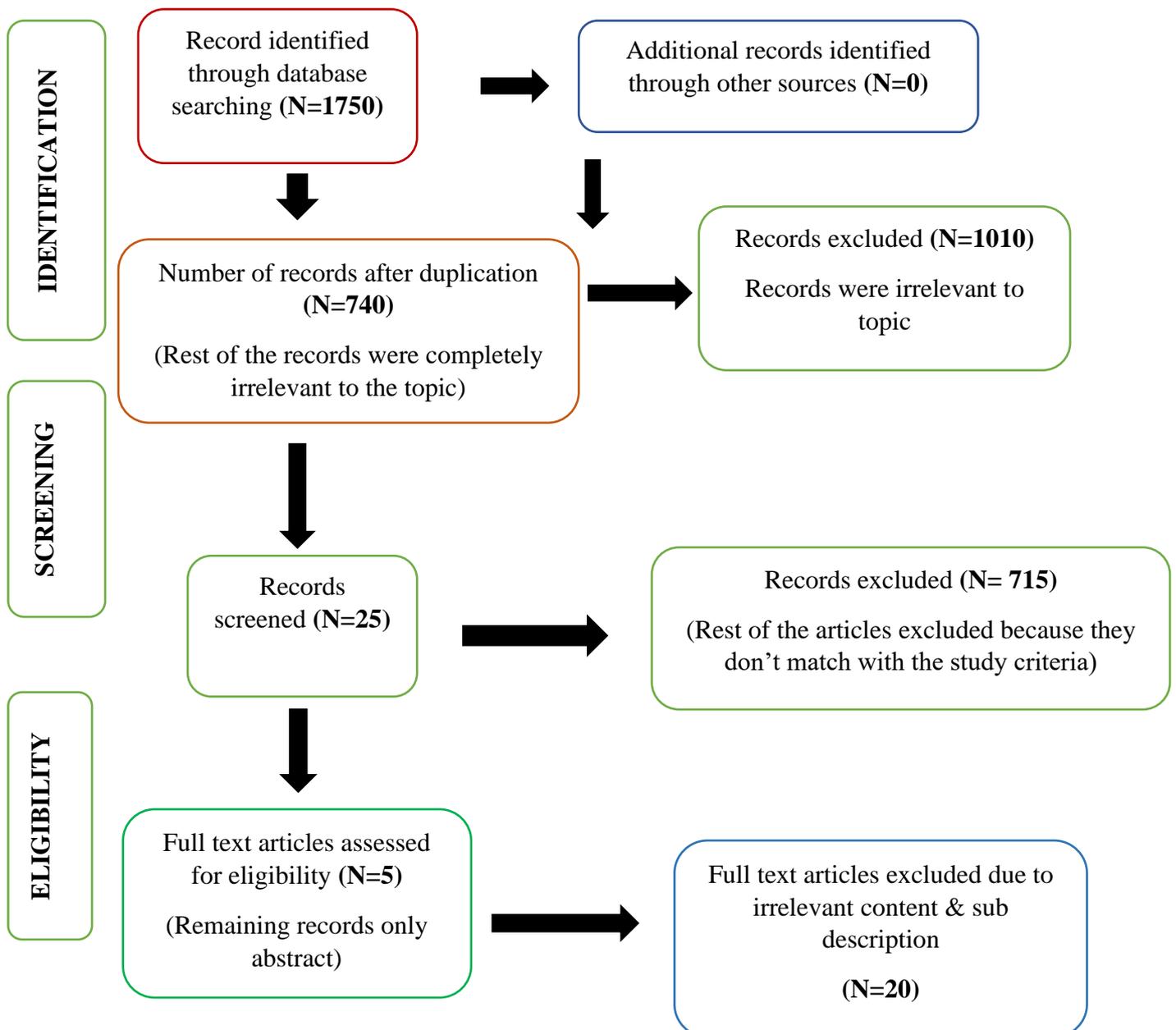
**TYPE OF PARTICIPANTS:** Under five children

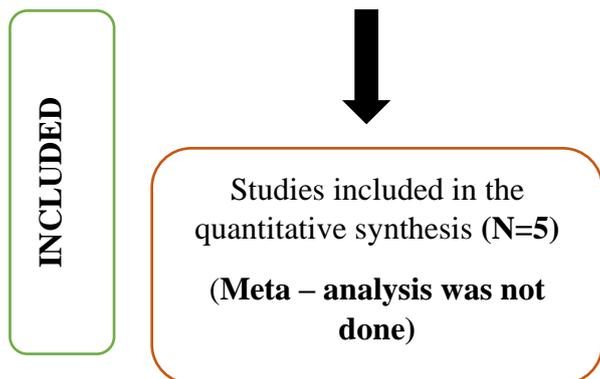
**SETTING:** -Urban and rural areas

**DELIVERY OF INTERVENTION :**

The narrative review has been predetermined with the analysis of reviews related to the topic “comparison of nutritional status of rural and urban areas under five children.” the search begins with keywords assessment, nutritional status, rural and urban. The online database which was used for the search of the review was Google scholar, PubMed from the year 2009 to 2020. Initial search retrieved 1750 articles over which 740 was selected manually and duplicates were removed and reviewed 25 articles for eligibility. 715 articles were rejected because of duplication in two databases. 20 more reviews were rejected due to the unavailability of the full content. So, 5 studies were screened in the quantitative synthesis.

### PRISMA FLOW DIAGRAM OF NARRATIVE REVIEW





**DATA EXTRACTION:**

S.no	Author and years	Research design	Finding of the study
1.	A MOHAMED et.al (2020) <sup>6</sup>	Cross sectional study	The result shows that Children were classified as per the conventional indices and STAMP. The prevalence of normal weight, height and BMI were 80%, 59.2% and 37.7% respectively. The prevalence of marginal underweight, marginal stunting and overweight was 17%, 27.4%, and 34% respectively and the prevalence of underweight, stunting and obese were 2.9%, 11.8%, and 28.1% respectively. As per STAMP, 57% of children were at low risk, 17.7% were at intermediate risk and 25.1% were at high risk of malnutrition. Concerning the difference between urban and rural areas, the prevalence of underweight and stunting in urban district were 0.00% and 6.7% respectively, and in rural district were 4.4% and 14.4% respectively.
2.	RANI POOJA, (2018) <sup>7</sup>	Non-experimental (comparative) research design	The study result shows that majority of children in both groups i.e., urban community 48.33% (29) and rural community 70% (42) have mild malnutrition. Percentage of severe malnutrition in both groups is nil. Result revealed that rural area is having more number of malnourished under-five children as compared to urban area. In comparison, the researcher found that rural area has 25% more malnourished children as compared to urban area.
3.	YADAV SACHIN SINGH.ET.AL (2016) <sup>8</sup>	Cross sectional study	Prevalence of underweight was higher in female compared to male children [42.9 percent vs 40] respectively and found that 44 percent of rural and 35 percent urban children were underweight and severe underweight was seen in 15.7 percent rural and 10 percent urban participant.

4.	SERAJUL ISLAMMD. ET.AL (2014) <sup>9</sup>	Descriptive cross sectional study	The results stated that, the children from rural area were underweight (38.8% mildly underweight and 25% moderately underweight) rather than overweight but inverse results were found for urban children. For HAZ, the prevalence of moderately stunting among rural children (44.45%) was higher than urban children (2.78%). From BAZ, the prevalence of obesity was presented higher among the urban children
5.	BHARATI PREMANANADA ET.AL(2009) <sup>10</sup>	cross sectional study	The results stated that, urban preschool children are heavier and Toller compare to rural counterpart. In the urban area, higher percentage of girls are affected by underweight (37.1%), and stunting (35.0%) than boys. In rural areas, the prevalence of underweight is also higher among girls (47.9%) compare to boys (45.7%). which is found to be much significant.

**OUTCOME:** This narrative review outcome revealed that the nutritional status of urban and rural under five children.

**Summary of findings:** The available literature was refined to get 5 quantitative studies:

All 5 articles show the nutritional status of urban and rural under five children.

#### **DISCUSSION:**

Malnutrition among children is a major public health problem in developing countries, resulting from consumption of poor diet over a long period of time. It has been reported that about 13 million infants and children, less than five years of age, die each year in developing countries and most of these deaths are attributed to undernutrition. The finding of the above reviewed studies shows that malnutrition in rural area of under five children range from 04.4 % to 70 % and in urban range from 2.78 % to 48.3 %. But range was reduced compare to earlier due to strategy and govt policies. Still major reductions are expected to maintain health status of child.

#### **IMPORTANCE IN EDUCATION:**

Having baseline information regarding prevention of malnutrition will help the participants to reduce the chances of malnutrition. The nurse educator gives more focus on teaching the mothers of under five children regarding prevention of malnutrition

#### **FUTURE SIGNIFICANCE:**

In order to reduce the chances of malnutrition associated with lack of nutrition. It is very important to provide education to the mothers of under five children related to prevention of malnutrition.

### **LIMITATIONS:**

- Electronic database were limited
- Limited to only nutritional status of under five children.

### **STRENGTH AND WEAKNESS:**

#### **STRENGTH:**

- Article search was carried out on a significant problem.
- Review could find out the nutritional status of under five children.

#### **WEAKNESS:**

- Only articles were included for data synthesis due to limitations.
- Meta-analysis was not done, only qualitative synthesis done for this review

### **CONCLUSION:**

Our pooled results support the finding that the malnutrition in children is currently and still a health issue of high burden in India. Despite many interventional programs from Government it remains a significant problem among the children. It has been estimated through various studies that the study recognized that there was a difference between anthropometry status of children lived in rural and urban area. There was severe malnutrition among the children existing in rural area, as most of the children were underweight, stunted and wasted. But prevalence of overweight and obesity were higher among the children in urban area. As the quality of future human resources depends on the present-day children, improvement of the nutritional level of today's children should be given top priority.

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