



Current Status of Malnutrition in India and Government Initiatives to Improve Nutrition and Health

Sharan Sadaf

Department of Nutrition, St. Ann's College for Women, Osmania University, Hyderabad, Telangana, India – 500 028.

ABSTRACT

A person's intake of calories and nutrients might be deficient, excessive, or unbalanced in the case of malnutrition. The correct development and growth of a child, as well as their future socioeconomic status, depend greatly on the nutrition of the mother, the baby, and the child. In India, there are disturbingly high rates of malnutrition among children, pregnant and lactating mothers, and teenage females. Because nutrition is multidisciplinary and cross-sectoral, stakeholders must work closely together. Although various government initiatives are in place and India has theoretically decreased malnutrition over the past ten years, there is still a need for effective application of research-based knowledge to address undernutrition, particularly because it hinders the socio-economic growth of the nation. These findings might be instructive for other developing nations aiming to lower child malnutrition in their regions. To reduce the incidence of malnutrition in India, it is necessary to build new programs, enhance the existing ones continuously, and incorporate a monitoring and assessment system.

Keywords: Malnutrition, India, mid-day meal, national Health Mission, poshan abhiyaan.

1. INTRODUCTION

As far as three of the global nutrition objectives for maternal, infant, and young child nutrition (MIYCN) are concerned, India is working to achieve them. The goal of minimizing anemia among women of reproductive age has not been met, and 53% of women between the ages of 15 and 49 are now afflicted.¹ In the meanwhile, there are not enough prevalence data or sufficient information to evaluate the progress India has made toward meeting the low-birth-weight objective. With 58% of babies aged 0 to 5 months exclusively breastfed, India is working continuously to meet the exclusive breastfeeding objective. Similar to how India is working to fulfill the stunting target, but higher than average for

Asia, 34.7% of children under the age of 5 are still afflicted (21.8%). With 17.3% of children under the age of five afflicted, more than the norm for the Asia region, India has not made any progress toward meeting the objective for wasting (8.9%). 1.6% of children under the age of five are overweight, and India is working to stop the trend from continuing.^{2,3}

India has made little progress on the non-communicable disease (NCD) objectives relating to food. With an estimated 6.2 % of adult women and 3.5% of adult men living with obesity, the nation has made no progress toward meeting the obesity objective. India has a lower rate of obesity than the norm for the area, which is 10.3% for women and 7.5% for men. At the same time, 10.2% of adult males and 9% of adult women are

*Corresponding Author: sharansadaf29@gmail.com

Received: 10 Oct 2021

Revised: 12 Oct 2021

Accepted: 15 Oct 2021

©2020, Open access. This article is distributed under the terms of the [Creative Commons Attribution-Noncommercial-Share Alike 4.0 Unported License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

thought to have diabetes.^{3,4}

According to the WHO, eating a balanced diet can help avoid several diseases, such as diabetes, heart disease, stroke, and cancer, as well as malnutrition. It is strongly advised to increase consumption of fresh vegetables, fruits, and other natural foods while decreasing intake of fats, sugar, and salt.⁵ The two biggest hazards to health worldwide are an unhealthy diet and inadequate physical activity. The eradication of industrially manufactured trans fats from the food supply and a reduction in salt and sodium consumption have been strongly advised by the WHO General Assembly as priority efforts.⁶

2. MALNUTRITION

The World Health Organization (WHO) defines malnutrition as a person's intake of energy and/or nutrients being deficient, excessive, or out of balance. The correct growth and development of a kid, as well as their future socioeconomic level, depend greatly on the nutrition of the mother, the baby, and the child.⁷ India is one of the nations in South Asia that is developing financially, academically, and technically the quickest. India has made economic growth, but has failed to address the problem of malnutrition, which has a negative impact on socioeconomic development. India is home to more than one-third of the world's undernourished children. Children who are malnourished account for half of the population of Bangladesh, India, and Pakistan.⁸

The rates of malnutrition among teenage girls, pregnant and lactating mothers, and children are disturbingly high in India, according to reports from the National Health & Family Survey, United Nations International Children's Emergency Fund, and WHO. India was placed 100th out of 118 nations with a major hunger problem in the 2017 Global Hunger Index (GHI) Report by the International Food Policy Research Institute (IFPRI). With a GHI score of 29.0, it comes in third place among South Asian countries, behind behind Afghanistan and Pakistan (serious situation). India was ranked 102nd out of 117 nations having a major problem with child wasting in the 2019

Global Hunger Index (GHI) study. In India, at least one in five young children under the age of five is wasted.⁹

The nutritional condition of mothers, breastfeeding habits, the education of women, and sanitation practices are some of the causes of malnutrition in the nation. These have a variety of effects on children, including as growth retardation, childhood sickness, and stunting. Economic disparity is one of the main factors contributing to malnutrition in India. The bulk of the population has a poor socioeconomic position, hence their food frequently shortages in both quality and quantity. Malnourished women are less likely to give birth to healthy children. Long-term harm is caused by nutritional deficits to both people and society. Nutritionally undernourished people are more susceptible to infectious illnesses like pneumonia and TB, which increase death rates, than their better-fed colleagues.

Additionally, those with nutritional deficiencies perform less effectively.^{10,11} Low productivity not only results in low compensation that keeps people in a cycle of undernourishment, but it also makes society less efficient, especially in India where labor is a key input for economic output. 12 On the other side, overeating can have negative effects as well. In India, the national obesity rate was 18% for males and 14% for women in 2010, with rates as high as 40% in major metropolitan areas. Numerous non-communicable illnesses, including chronic respiratory illnesses, malignancies, diabetes, and cardiac diseases, are brought on by obesity.¹³

3. MANAGEMENT, POLICIES AND PROGRAMMATIC INITIATIVES

The Indian government has started a number of initiatives to address the rising number of nutrient-deficient kids. "The obligation of the state is to elevate the level of nutrition and living conditions and to improve health," reads Article 47 of the Indian Constitution.¹⁴ The Indian government has given malnutrition a high priority, thus it is putting different initiatives into place through several Ministries, including

Integrated Child Development Services, NCF, and the National Health Mission. The Indian government has also made a number of positive moves in favor of the UN resolutions. The Government of India has launched the following initiatives and schemes to promote nutrition and fight malnutrition.^{15,16}

3.1 Integrated Child Development Scheme

A charity program run by the Indian government called Integrated Child Development Services (ICDS) offers food, preschool instruction, and basic medical care to kids under the age of six and their mothers. The program was established in 1975 with the goal of empowering mothers and promoting the overall development of children. This program is centrally sponsored. The Anganwadi Center is where the program is mostly administered. The Ministry of Women and Child Development oversees the program. The following are the main goals of the Integrated Child Development Services (ICDS) program:

- To enhance the nutritional and physical health of kids in the 0–6 age range.
- Laying the groundwork for a child's optimal psychological, physical, and social growth
- To lower the prevalence of death, disease, hunger, and dropout from school
- To successfully coordinate policy and execution across the many ministries in order to enhance child development
- Through good nutrition and health education, to improve the mother's capacity to take care of the child's regular nutritional and health needs.

Under ICDS, women who are pregnant or nursing and children under the age of six are identified in the neighborhood and given additional feeding and growth monitoring services. The recipients receive supplemental nourishment for 300 days. The program aims to close the caloric gap between children and women in low-income groups and the average calorie intake by providing extra feeding. The care of young children, prenatal care for expectant moms, and postpartum care for nursing mothers are all

provided. Regular health examinations, deworming, weight monitoring, vaccines, and the provision of basic medications are among the services provided. Women between the ages of 15 and 45 are covered for nutrition and health education. The BCC (Behavior Change Communication) technique includes this. The long-term objective is to increase women's capacities so they can take care of their own health, nutrition, and development requirements as well as those of their families and children.¹⁷

3.2 Mid-Day Meal Scheme (MDM)

The National Programme of Nutritional Support to Primary Education (NP-NSPE), often known as the Mid-Day Meal Scheme, was implemented in India on August 15, 1995. The National Program of Mid-Day Meal in Schools, often known as the Mid-Day Meal Scheme, replaced the term NP-NSPE in October 2007. The Mid-Day Meal Program was renamed "PM POSHAN" or Pradhan Mantri Poshan Shakti Nirman in September 2021. In addition to those presently served by the mid-day program, PM POSHAN will expand the hot prepared meals to pupils enrolled in pre-primary levels or Bal Vatikas of government and government-aided elementary schools.

With a budget of Rs 1,30,794.90 crore, the redesigned program has been established for 5 years, from 2021–2022 to 2025–2026. The 11.80 crore youngsters enrolled in the country's 11.20 lakh schools are expected to gain, according to the reports. The updated program would prioritize monitoring schoolchildren's nutritional status in addition to serving them nutritious meals. There will be particular allowances for dietary goods in areas with a high anemia frequency. On school campuses, the government is also thinking of establishing nutrition gardens with student involvement. The program could also include culinary contests to promote ethnic cuisine and creative meals made using regional components. It is the biggest school food program in the world and is intended to help achieve the universalization of primary education.

India still struggles with serious problems like child stunting, child mortality, child wasting, and undernourishment in spite of these comprehensive child development programs. India's ranking of 94 in the Global Hunger Index 2020 reflects this. Caste-based discrimination undermines MDMS's goal. The National Campaign on Dalit Rights' 2008 Report to the UN Committee on Economic, Social, and Cultural Rights also makes note of the fact that Dalit children are routinely refused lunchtime meals to uphold the superiority of these upper caste groups during times of caste conflict. According to the National Family Health Survey 2015–16, 39% of children are chronically malnourished. The quality of the food is frequently disputed, and several media stories indicate how children's health is suffering as a result of the food served during midday meals. Since many children lack aadhar cards, there are drawbacks to linking Aadhar to the midday meal program. These drawbacks include limiting the children's access to the MDMS.¹⁸

3.3 National Health Mission (NHM)

India's government created the National Health Mission with the goal of alleviating the country's malnutrition epidemic. With the intention of focusing on both rural and urban populations, this mission absorbed two earlier hunger initiatives that were already in place. The Ministry of Health and Family Welfare is carrying out this initiative, which was started in 2013. Reproductive, Maternal, Neonatal, Child, and Adolescent Health (RMNCH), as well as Communicable and Non-Communicable Diseases, are the three core programme components. According to the NHM, everyone will be able to receive fair, affordable, and high-quality healthcare services that are accountable and sensitive to the requirements of their patients.

The Mission also addresses the prevention, detection, and management of child malnutrition through the use of "convergence". It is being carried out by ICDS and the Government of India's Ministry/Department of Health & Family Welfare. However, the majority of basic health institutions

struggle with a serious lack of infrastructure, qualified paramedics, and supply of many necessary medications and vaccinations.¹⁹

3.4 National Food Security Act (NFSA)

In 2013, the Indian government adopted the National Food Security Act (NFSA). In all states and Union Territories, it is in charge of providing subsidized food grains to up to 75% of the rural and 50% of the urban populations (UTs). A shift from a welfare-based to a rights-based approach to food security was made with the passage of the NFSA. The government of India's current food security initiatives are transformed into legal entitlements under the NFSA. According to the National Food Security Act, the recipient AAY household is entitled to 35 Kg of food grains per month, while each PHH individual is entitled to 5 Kg. The NITI Aayog calculated the state-by-state coverage using data from the NSSO's 2011–12 Household Consumption Expenditure Survey. Under the Targeted Public Distribution System, the Act allowed up to 75% of the rural population and 50% of the urban population to receive subsidized food grains (TPDS). Therefore, the Act covers almost two thirds of the populace to obtain heavily subsidized food grains.

Under this plan, the Public Distribution System would offer the food grains at heavily discounted rates. The Act guarantees women's and children's nutritional support. The MDM and ICDS programs would grant pregnant and nursing women the right to complimentary, nutrient-dense meals. Under the MDM and ICDS programs, kids between the ages of 6 and 14 would also be eligible to free, nutrient-dense meals. Pregnant women and breastfeeding mothers are also given maternity benefits of at least ₹6000. The Central Government assists the States in meeting their transportation costs for food inside the State, and it also manages the margins for Fair Price Shop (FPS) merchants in accordance with the standards. In the case that food grains are not supplied, the recipients are given a food security allowance.

Global food security refers to everyone having access to affordable, wholesome food at all times. It is distinguished by food availability, accessibility, use, and stability. The right to eat is not explicitly stated in the Indian Constitution. Before the NFSA was passed, the right to life guaranteed by Article 21 was understood to encompass the right to a dignified existence, which may include the right to food and other requirements of life.

In order to increase agricultural production, the government should implement integrated policy frameworks and offer options for greater food storage. The process will be made more efficient by using information technology from the time that food grains are purchased until they are distributed. The recipients should have access to information on the whole process, from the quality of the food grains through the storage facilities where the grains were held. The misunderstanding would be effectively eliminated by a single-ration-card system, especially for migrants, as this would provide the recipients the freedom to pick from any PDS outlet. Add all the states to the Integrated Management of PDS (IMPDS) coverage area.²⁰

3.5 Village Health Sanitation and Nutrition Committee (VHSNC)

One of the crucial elements of the National Rural Health Mission is the village health, sanitation, and nutrition committee (VHSNC). The organization was formed to work together to address health and social determinant issues at the village level. This program raises awareness of nutritional problems and the relevance of nutrition as a key factor in health. It conducts surveys on the village's nutritional situation and deficits, particularly among mothers and children. Through a process of community interaction, it aims to discover locally accessible foods with high nutritional content as well as to distribute and promote best practices (traditional wisdom) compatible with the local culture, capabilities, and physical environment. Village Health and Nutrition Day is monitored and overseen to

guarantee that it is held each month in the village with the active involvement of the whole village. It enables the early identification of malnourished children in the neighborhood, the coordination of referral to the closest Nutritional Rehabilitation Center (NRC), and follow-up for long-term success. It oversees the operation of the village's Anganwadi Center (AWC) and supports its efforts to raise the nutritional status of mothers and children.²¹

3.6 Food Safety and Standard Authority of India (FSSAI)

For the correct oversight of food hygiene and quality in India, the Food Safety and Standards Authority of India (FSSAI) was established in 2008. Since its implementation in 2011, it has been in charge of overseeing our nation's food safety. Additionally, it provides micronutrients for food fortification and instructs school workers in the preparation of children's midday meals. For instance, the FSSAI instructs school personnel in the fortification of rice with iron in the Gajapati District of Odisha State (India). The Indian Food Safety and Standards Authority carries out the following duties:

- Creating regulations and standards
- Obtaining a License
- Giving License
- Testing Food Standards
- Regular Audits
- spreading knowledge on food safety
- Updating the government through maintaining records and data²²

3.7 Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) or Sabla Scheme

In 205 districts chosen from all the States/UTs, the government is putting the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG)-"Sabla" into action. Sabla is a program that strives to empower Adolescent Girls (AGs) (11–18 years old) via education in nutrition, health care, and life skills. The two main parts of Scheme Sabla are Nutrition and Non-Nutrition.

All females between the ages of 14 and 18 are supplied with supplemental nutrition, which includes 600 calories, 18 to 20 grams of protein, and micronutrients, every day for 300 days of the year, as part of the nutrition component. The non-nutrition component attends to the requirements of teenage females in terms of development. Adolescent girls between the ages of 11 and 18 are given IFA supplements, health check-ups and referral services, nutrition and health education, ARSH counseling and guidance on family welfare, life skill education, guidance on accessing public services, and vocational training (only for 16 to 18-year-old adolescent girls) as part of this component of the school. Additionally, it strives to mainstream out-of-school AGs into both official and informal education. The program is anticipated to serve close to 100 lakh teenage girls annually.²³

3.8 National Nutrition Mission (NNM)

The Government of India started Poshan Abhiyaan, commonly known as the National Nutrition Mission (NNM), in 2018 (although the initiative was being executed in 2017) with the purpose of addressing the widespread malnutrition problem in India. The mission's main goals are to lower the rate of undernutrition and improve the nutritional status of children in the nation. By 2022, the multi-ministerial campaign hopes to eradicate malnutrition from the nation. The main program for improving the nutritional outcomes for children, pregnant women, and nursing mothers in India is called Poshan Abhiyaan. The mission makes use of technology and departmental and module convergence.

The acronym "Poshan" refers for "Prime Minister's Overarching Scheme for Holistic Nutrition" and appears in the program's name. The program has particular goals for lowering low birth weight, anemia, stunting, and undernutrition. The National Nutrition Mission's goal is to reduce stunting from 38.4% to 25% by 2022, as stated in "Mission 25 by 2020." The steady scaling up of the interventions under the Integrated Child Development Services (ICDS)

Systems, which are supported by the World Bank, is another aspect of the goal. The Ministry of Women and Child Development, GOI, is the implementing body. Additionally essential to the objective is the NITI Aayog. The Vice Chairperson of NITI Aayog serves as the chair of the National Council on India's Nutritional Challenges, which was established under the Poshan Abhiyaan.²⁴

4. CONCLUSION

Each program has to include a robust monitoring and evaluation component so that we can systematically learn more than we can from customer satisfaction level input. It will improve intra and inter disciplinary knowledge, collaboration, and coordinated action to invest in professional human resource empowerment in many areas of nutrition science and network. This investment becomes successful via interaction with a broad spectrum of industries and disciplines in nutrition science and practice. The development of the aforementioned programs has the potential to aid in the eradication of malnutrition, but we must concentrate on additional implementation tactics and look for fresh ideas for root action. In order to assure more action in enhancing nutrition well-being, further advancements in programmatic design are necessary to enable convergence of action from important line departments such as education and renewable energy as well as all-encompassing growth sectors.

Acknowledgement: For her great cooperation with this work, Ms. Meena Pathangey, Head of the Department of Nutrition at St. Ann's College for Women in Hyderabad, Telangana, India, is gratefully acknowledged by the authors.

Conflict of Interest: The authors do not identify any conflicting interests.

REFERENCES


1. Gautam S, Min H, Kim H, Jeong HS. Determining factors for the prevalence of anemia in women of reproductive age in Nepal: Evidence from recent

- national survey data. *PLoS One*. 2019 Jun 12;14(6):e0218288.
- Rathaur VK, Pathania M, Pannu C, Jain A, Dhar M, Pathania N, Goel R. Prevalent infant feeding practices among the mothers presenting at a tertiary care hospital in Garhwal Himalayan region, Uttarakhand, India. *J Family Med Prim Care*. 2018 Jan-Feb;7(1):45-52.
 - Singh S, Srivastava S, Upadhyay AK. Socio-economic inequality in malnutrition among children in India: an analysis of 640 districts from National Family Health Survey (2015-16). *Int J Equity Health*. 2019 Dec 27;18(1):203.
 - Mazidi M, Banach M, Kengne AP; Lipid and Blood Pressure Meta-analysis Collaboration Group. Prevalence of childhood and adolescent overweight and obesity in Asian countries: a systematic review and meta-analysis. *Arch Med Sci*. 2018 Oct;14(6):1185-1203.
 - Cena H, Calder PC. Defining a Healthy Diet: Evidence for The Role of Contemporary Dietary Patterns in Health and Disease. *Nutrients*. 2020 Jan 27;12(2):334.
 - Al-Jawaldeh A, Hammerich A, Doggui R, Engesveen K, Lang K, McColl K. Implementation of WHO Recommended Policies and Interventions on Healthy Diet in the Countries of the Eastern Mediterranean Region: From Policy to Action. *Nutrients*. 2020 Nov 30;12(12):3700.
 - Saunders J, Smith T. Malnutrition: causes and consequences. *Clin Med (Lond)*. 2010 Dec;10(6):624-7.
 - Siddiqui F, Salam RA, Lassi ZS, Das JK. The Intertwined Relationship Between Malnutrition and Poverty. *Front Public Health*. 2020 Aug 28;8:453.
 - Narayan J, John D, Ramadas N. Malnutrition in India: status and government initiatives. *J Public Health Policy*. 2019 Mar;40(1):126-141.
 - Grosshauser FJ, Kiesswetter E, Torbahn G, Sieber CC, Volkert D. Reasons for and against Nutritional Interventions. An Exploration in the Nursing Home Setting. *Geriatrics (Basel)*. 2021 Sep 16;6(3):90.
 - Norman K, Haß U, Pirlich M. Malnutrition in Older Adults-Recent Advances and Remaining Challenges. *Nutrients*. 2021 Aug 12;13(8):2764.
 - Alderman H, Behrman JR, Hoddinott J. Economic and nutritional analyses offer substantial synergies for understanding human nutrition. *J Nutr*. 2007 Mar;137(3):537-44.
 - Sahoo K, Sahoo B, Choudhury AK, Sofi NY, Kumar R, Bhadoria AS. Childhood obesity: causes and consequences. *J Family Med Prim Care*. 2015 Apr-Jun;4(2):187-92.
 - Ramachandran P. Food & nutrition security: challenges in the new millennium. *Indian J Med Res*. 2013 Sep;138(3):373-82.
 - Vellakkal S, Gupta A, Khan Z, Stuckler D, Reeves A, Ebrahim S, Bowling A, Doyle P. Has India's national rural health mission reduced inequities in maternal health services? A pre-post repeated cross-sectional study. *Health Policy Plan*. 2017 Feb;32(1):79-90.
 - Community and Public Health Nutrition. *Curr Dev Nutr*. 2018 Jul 4;2(11):nzy033.
 - Chakrabarti S, Raghunathan K, Alderman H, Menon P, Nguyen P. India's Integrated Child Development Services programme; equity and extent of coverage in 2006 and 2016. *Bull World Health Organ*. 2019 Apr 1;97(4):270-282.
 - Sembiath S, Burman J, Dasgupta A, Paul B. Safety of food served in Mid-Day Meal program: An in-depth study in upper primary schools of Kolkata. *J Family Med Prim Care*. 2019 Mar;8(3):938-943.
 - Prinja S, Sharma A, Nimesh R, Sharma V, Madan Gopal K, Badgaiyan N, Lakshmi P, Gupta M. Impact of National Health Mission on infant mortality in India: An interrupted time series analysis. *Int J Health Plann Manage*. 2021 Jul;36(4):1143-1152.
 - Desai S, Vanneman R. Enhancing Nutrition Security via India's National Food Security Act: Using an Axe instead of a Scalpel? *India Policy Forum*. 2015 Aug 5;11:67-113.
 - Azeez EPA, Siva PS, Kumar APS, Negi DP. Are Village Health, Sanitation, and Nutrition Committees Functional? Evidence from Chhattisgarh and Madhya Pradesh. *Indian J Community Med*. 2021 Jan-Mar;46(1):80-84.
 - Jindal AK. Food safety and quality control: Best practices in the Indian Armed Forces. *Med J Armed Forces India*. 2020 Apr;76(2):142-146.
 - Raikar K, Thakur A, Mangal A, Vaghela JF, Banerjee S, Gupta V. A study to assess the effectiveness of a nutrition education session using flipchart among school-going adolescent girls. *J Educ Health Promot*. 2020 Jul 28;9:183.

24. Aggarwal P, Kakkar R. National Nutrition Strategy: Integrated Child Development Scheme More The Needed Timely Modification to Make Effective. Indian J Pediatr. 2019 Jul;86(7):628-632.

Cite the Article as: Sadaf S. Current Status of Malnutrition in India and Government Initiatives to Improve Nutrition and Health. J Drug Vigil Altern Ther. 2021 Dec 30;1(4):135-142.

www.jdvat.org

 This is an open access paper distributed under the copyright agreement with JDVAT, which permits non-commercial unrestricted use, distribution, and reproduction in any medium or format, provided the original work is properly cited.