

REVIEW ARTICLE

Nutritional Health Programmes in India: How far have we reached?

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ABSTRACT

The vicious cycle of poverty and undernutrition in India has been a crippling criterion to the development of the nation. Health being a fundamental right, it falls upon the government to make sure the citizens are well nourished. Hence, there is a need for National Health Programmes with a specific focus on nutrition. Over time, India has come up with numerous programmes with focused objectives on nutrition. Some have seen significant success, like the Goitre Control Programme and the Integrated Child Development Service Project, while others are still struggling to meet their targets at least halfway, like the Nutritional Anaemia Programme. The latest and the most elaborate initiative by the government of India, Poshan Abhiyaan, stands out in its convergence and community mobilisation strategies. It puts the vulnerable population in the spotlight, under-five children and expectant or nursing mothers. The holistic approach described in the programme is a game changer in the approach to nutrition as far as India is concerned. The programme is right now gaining much attention in the post pandemic era as the country's magnum opus to be, among health programmes, in the near future.

KEYWORDS

Health Programmes; Nutrition; Poshan Abhiyaan

INTRODUCTION

It was not until 1936 that the government of India felt the need for a nutritional survey among the people of India to customise the dietary requirements of the Indian population, which significantly differs from the Western population. Nutritional research and acquired knowledge in the field to be used for dietary guidelines in the country were largely dependent on the data from the West. In 1936, the symposium on 'The Problem of Nutrition in India' put forward the need for our own nutrition-related data based on which health programmes were initiated in Independent India. The Indian Research Fund Association set up a separate Nutrition Advisory Committee to guide the policymakers in the field of nutrition.(1) Following the initiation of The Advisory Committee, the country has developed several health programmes and continues to do so. Different ministries are also involved in the process, from Public Distribution to Water and Sanitation. Despite

the effort, India still lags in reaching the standards and targets set according to the country's own data. The Global Hunger Index 2023 ranked India at 111 out of 125 countries. (2) The National Family Health Survey 5 claims that one-third of the nation's under-five children are stunted and underweight and more than half of reproductive-age women are anaemic. (3) With newer initiatives like Poshan Abhiyaan and the revised Poshan 2.0 an integrated and convergent path lies ahead in India's nourishment journey.

The problem

As described in the National Nutrition Policy 1993, under-nutrition is a subset of more complex factors like food production, distribution and accessibility. This sums up the food security the government has long been trying to address. The three important issues depicted in the policy are agriculture, food and nutrition. The interventions designed for addressing undernutrition should be customised to address these issues specifically. While economic

development can ensure the purchasing power of people, strengthening agricultural practices should also be a priority to ensure food security. Access to safe and quality food products is a further concern in food security. Food literacy, among people is a must to ensure safe consumption. (4) Front of package labelling in India still lacks standardised guidelines.

Nutritional health issues can be broadly classified into general and specific. General nutritional health issues cover a broad spectrum of nutritional disorders from obesity to protein energy malnutrition. Specific nutritional health issues address micronutrient deficiencies, which have specific clinical manifestations resulting in particular incapacities among the patients (Hidden Hunger). (5) In India anaemia makes a relevant example of such specific nutritional health issue.

The Government of India has focused on both of them with their various nutritional health programs over the time. The national programs were designed to address various identified nutritional concerns in the country. It has now evolved from the vertical to a horizontal approach, bringing a majority of them together under a single umbrella.

Nutritional Health Programmes in India; General Nutrition

One of the government's earliest nutritional interventions was the opening of fair-price shops under the Public Distribution System in 1944. It has undergone a lot of revisions and expansions in the due course of time. The ration cards issued under the programme are still a significant means of acquiring food grains for the poor in the country. Initiated and sustained by the Ministry of Consumer Affairs, the system stands out as the only programme that brings the whole population under its umbrella. Priority households and Antyodaya cardholders receive up to 35kg of food grains for a nominal price (Rs 2/kg for wheat and Rs 3/kg for rice).(6)

Another initiative from the Ministry of Education was to provide a single hot-cooked meal to the students enrolled in schools. The Mid-Day Meal Programme in 1962 was intended to attract children to and keep children in the school. The provision for a nutritious meal covering one- third of their energy requirement and half of their protein requirement every day came into practice in 1995 with the Mid-Day Meal Scheme for children of lower primary classes. This programme also witnessed many expansions in the future and is currently integrated with Poshan Abhiyaan as Poshan Shakthi Nirman (PM POSHAN). (7,8)

In a resource-limited country like India, it is often tricky and impractical to spend on the overall

population for a health intervention like nutrition. Hence, it becomes crucial to focus on key targets to improve the health status of the population. The Applied Nutrition Programme in 1963, the Balwadi Nutrition Programme in 1970 and the ICDS Projects in 1975 were all initiated by the Ministry of Women and Child Development, with specific and vulnerable populations as targeted beneficiaries. All the programmes were centred on pregnant and lactating mothers and under-five children, predominantly. ICDS became one of the world's largest programmes centred on early childhood development. Anganwadi, as it is popularly known, has a peripheral health worker trained in identifying and educating mothers on undernutrition and anaemia. ICDS Projects follow population norms for starting a project and have nutrition norms for the supplementary nutrition provided to the beneficiaries. (8,9,10) The programme is also now integrated with Poshan Abhiyaan and the latest and modern Saksham Anganwadies are being built.

Specific Nutritional Programmes

Micronutrient deficiencies went unnoticed until 1962. The National Goitre Control Programme was started after pockets of endemic goitre were identified in the country. In 1992, it was renamed the National Iodine Deficiency Disorders Control Programme after discovering the varying spectrum of disorders caused by iodine deficiency. It introduced and publicised the use of iodised salt, which drastically changed the prevalence of Iodine Deficiency Disorders. The 2015-16 surveys say that only 315 districts had more than 5% of the total goitre rate. NFHS 5 found that 94.3% of households use iodised salt in India. (9,10,11)

Nutritional blindness is a major concern in the country, affecting 7 million children every year. Trials conducted by the National Institute of Nutrition Hyderabad found mega doses of vitamin A supplementation to be effective in preventing nutritional blindness in children. Following this, in 1970, the National Prophylaxis Programme against Vitamin A Deficiency was launched under which biannual rounds of vitamin A supplementation is given to children under 5 years of age. It is now linked with the Universal Immunisation Programme. As of 2019-21, 71.2% of the children under 3 years of age had received Vitamin A doses under the programme in India.(12)

Anaemia has been challenging the Indian health front for centuries. Numerous interventions have failed to effectively control this preventable health hazard. The programme started in 1970 as the National Programme for Nutritional Anaemia and was revised in 2013 as the National Iron Plus Initiative. The government has been distributing

iron and folic acid tablets to the beneficiaries under the programme for decades. These programmes were not found to be effective in preventing anaemia among reproductive-age women and their children. (9,10,13)

An Intensified Iron Plus Initiative, with the title and slogan Anaemia Mukta Bharat, was started in 2018. The programme initiated a 6*6*6 strategy with 6 groups of beneficiaries, 6 interventions, and 6 institutional mechanisms. Under the programme, prophylactic and therapeutic distribution of iron supplements is done with protocols drawn for the beneficiaries. The institutional mechanisms established under the programme are unique, with a National Centre of Excellence established at AIIMS New Delhi. The programme was able to reach 95% of pregnant women and 70% of nursing mothers but only less than 50% of the rest of the beneficiaries as of 2023.(13) While the pandemic could have interrupted the smooth functioning of the programme it is alarming that the anaemia prevalence among the beneficiaries went uphill as per NFHS 5. Among under-five children anaemia raised from 58.6% to 67.1% from NFHS 4 to NFHS 5. Among reproductive-age women, it rose from 53% to 57%. The programme has also been converged with Poshan Abhiyaan and is now carried out parallel to it. (3)

Poshan Abhiyaan

The programme is a lifecycle approach to addressing the problem of malnutrition in the country. Started as the National Nutrition Mission in March 2018, it was renamed The Prime Minister's Overarching Scheme for Holistic Nourishment (POSHAN) by May 2018. The initiative focused on combining existing nutritional programmes under one umbrella. The Ministry of Women and Child Development, through its existing ICDS platforms, has made it possible to bring nutritional interventions to people under the programme. The Anganwadies as the centre of convergence and service delivery was a smart move in integrating various programmes. (14,15)

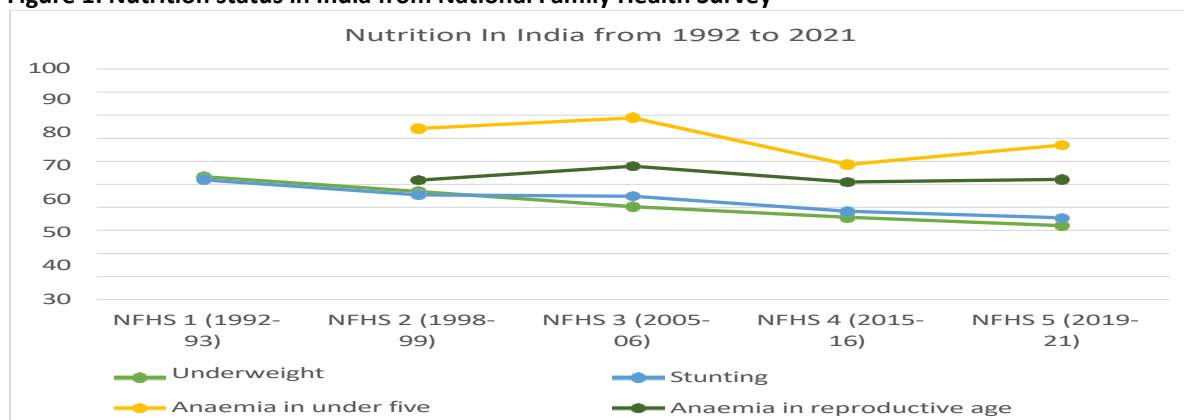
The mission's five pillars are the ICDS Common Application System, a real-time data entry and monitoring facility that uses smartphones, convergence action planning across ministries and departments, capacity building through an incremental learning approach, behaviour change communication and community mobilisation, and performance incentives. In 2022 the programme had revised guidelines for Saksham Anganwadi and Poshan 2.0. The modernised Anganwadies provide not only health services like immunisation for children and pregnant women but also supplementary nutrition to them and nursing

mothers. The supplementary nutrition is also provided to adolescent girls in aspirational districts. Village Health, Sanitation and Nutrition days are utilised as the perfect converging platform for the frontline workers as well as beneficiaries. The primary beneficiaries are the target populations, women and children, while the secondary beneficiaries are the husbands, in-laws and elders of the village, who will also be sensitised about the importance of good nourishment practices and the services provided within the programme. The vision is to bring about a *Jan Andolan* (people's movement) through *Jan Bhagidari* (people's participation). Poshan Panchayats are instilled to oversee the functions and public auditing. (14-19)

The 2021 progress report on Poshan Abhiyan by Niti Aayog states that the fund utilisation for the programme among 23 States/Union Territories is less than 50% of that sanctioned. There were large gaps in staff training as well. The activities conducted during *Poshan Maah*, the annual campaign month for nutrition awareness significantly increased from 2019 to 2020. The programme's success in shifting the focus to nutrition in the first 1000 days of life was mentioned in the impact study of Poshan Abhiyan by the Ministry of Women and Child Development. Poshan Tracker app disseminated among the Anganwadi Workers were successful in monitoring the services delivered effectively. According to the e-bulletin issued by the Ministry of Women and Child Development in 2023 94% of the beneficiaries were Aadhar verified. 77.8% of the Anganwadi Centres remained open for at least 21 days a month in the country. The coverage for take-home ration and hot cooked meals were 52.2% and 27.7%, respectively. (19,20)

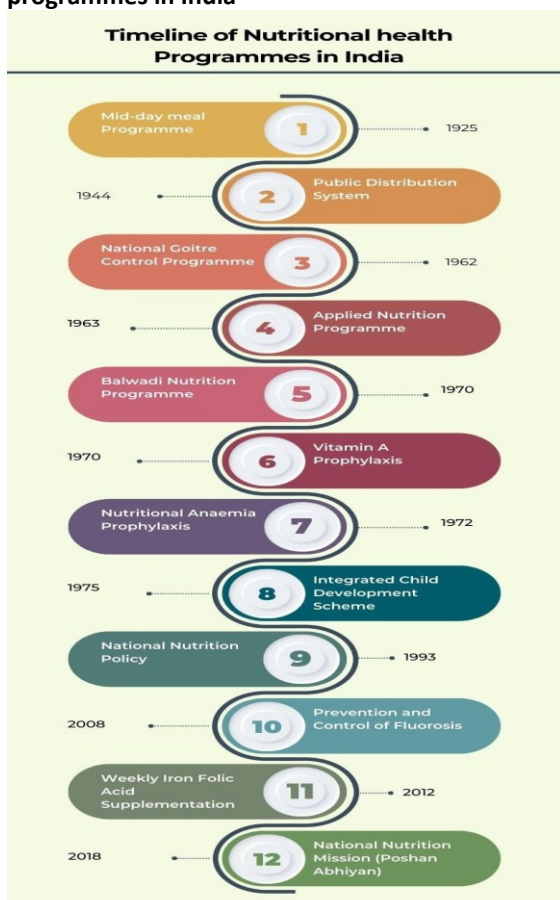
Evidently, the programme has not hit its target yet. The NFHS 5 and the ICDS data, as monitored through the Poshan Tracker, say undernourishment is still as prevalent as it was. According to NFHS 5, 35.5% of under-five children are stunted, and 32.1% are underweight. As of July 2023, there is a 39.7% prevalence of stunting among the beneficiaries of Poshan Abhiyan under five years of age. (18) While nutritional indicators are more or less plateauing over time, anaemia is waxing high. NFHS 5 says 67.1% of under-five children and 57% of reproductive-age women are anaemic in the country.(3) The data from NFHS over the period shows that the nutritional status of the country has been improving with respect to underweight and stunting among children, but the level of anaemia among children and reproductive-age women continues to be prevalent at over 50%. (Figure 1) (21)

Figure 1: Nutrition status in India from National Family Health Survey



Despite the pandemic bringing everything to a standstill for almost two years, the programmes were able to sustain their achievements. The existing infrastructure continues to function even though they are understaffed and underfunded. The coordinated and cross-sectoral efforts from different ministries ranging from Panchayati Raj institution to Information and Broadcasting involved in the program has the potential to ensure food security in the nation.

Figure 2: Timeline of nutritional health programmes in India



Future of Nutrition in India

The Government of India has laid out tremendous opportunities for the stakeholders over the past decades (Figure 2). Integration of Poshan Abhiyaan with ICDS has proved to be efficient. The existing infrastructure of ICDS which involves Anganwadi workers ensures the grassroots level penetration of the programme. The National Health Mission also provides the ASHA/ANM to reach the majority of people, in need of the services. The oldest intervention from the government, the public distribution system is still functional and over 2.5 crore households benefit from it. (6)

There are obvious gaps, mostly in capacity building and coverage, as identified in the NITI Ayog's Progress report for Poshan Abhiyaan. Timely revision of guidelines and recruitment of human resources will be the most important steps towards a malnutrition-free India (Kuposhan Mukh Bharat). The mass awareness campaigns should reach larger number of people, for which the Jan Andolan needs to be more extensive. Information and Broadcasting Ministry can be usefully leveraged for the purpose. (19)

The ultimate solution to malnutrition will be to ensure food security. The vicious cycle of poverty, undernutrition, and illness, as identified in the National Nutrition Policy of 1993, is relevant 30 years later.(4) PM POSHAN continues to be effective in ensuring nutrition among school going children. Employment generation through specific interventions like the Employment Guarantee Act which in turn increases the purchasing power of people is vital to this solution. Advancement in the field of agriculture is also necessary, as the availability and affordability of food grains is a concern, especially during adverse weather incidents.

CONCLUSION

The country has been relatively successful in improving the various health deficits from nutritional problems through various programs. Different ministries ranging from Consumer Affairs to Health and Family Welfare are now actively involved National Nutritional Programmes. These programmes are not devoid of lacunae, as evidenced from various quality checks mentioned. The Covid 19 pandemic was also a significant factor interrupting the progress of nutritional health programs. The existing infrastructure needs to be strengthened to address these gaps. Leveraging corporate social responsibility and public-private partnership are feasible options with respect to India. The issues around farming and cultivation are also important contributors to the gaps. Timely identification and resolution of agricultural barriers based on scientific and feasible measures are recommended. More focus on community awareness and mobilisation needed to convey the message of people's health in people's hands.

RECOMMENDATION

The authors recommend further research on programme evaluations of the existing infrastructure under the umbrella of Poshan Abhiyan and identification of specific lacunae that can be addressed individually.

LIMITATION OF THE STUDY

The study is a review article based on existing data, hence is limited by the unavailability recent and updated information.

RELEVANCE OF THE STUDY

The study provides an insight to the operations of previous and existing national programmes that contribute to nutritional determinants of health in the country.

AUTHORS CONTRIBUTION

All authors have contributed equally.

DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors haven't used any generative AI/AI assisted technologies in the writing process.

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