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My plate for the day: A visual tool for balanced diets and nutritional equity

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Abstract

The concept of "My Plate for the Day" is being promoted by national nutrition initiatives in India, including ICMR(2024), which introduced this model to encourage people to eat a balanced diet that consists of 8-10 food groups each day, the utmost objective of the concept is promoting diversity in food and to reduce the risk of developing micronutrient deficiencies, NCDs, and hidden hunger. It aligns with the POSHAN Abhiyaan's (National Nutrition Mission) guidance on dietary diversification through daily consumption of whole grains, fruits, and vegetables and with other programs (e.g. mid-day meals) that provide support for gut health, immune function, and equity to safeguard vulnerable population groups. The "Eat Right" campaign launched by FSSAI across the country through schools and communities provides the visual representation of a healthy plate and encourages citizens to follow healthy practices to eat right. However, the promotion drives need wider streaming to reach larger sectors of our population.

Keywords: My plate for the day, nutrition education tool, dietary diversity, food security, hidden hunger, non-communicable diseases (NCDs), portion control, public health nutrition.

Introduction

In India, it is found that the majority of people have very little or no idea regarding healthy food habits and the ways in which they can select healthy food items from their traditional food habits. Most of the population depend on unhealthy traditional consumption patterns. There is a perceived gap between dietary awareness and practice.

NIN developed the idea of 'My Plate for the Day' concept for the promotion of healthy food varieties, which is based on scientific evidence and cultural dietary practices. In this way, they have been able to communicate the information in an understandable manner by including the recommendations for the food groups, namely grains, legumes, cereals, vegetables, fruits, dairy products, nuts/seeds/staples, and healthy fats/oils. By promoting the eight food groups, they have been able to address the issue of deficiencies, fight against hidden hunger, and ultimately fight against non-communicable diseases like diabetes, obesity, heart disease, etc.

"My Plate" also aims at portion control. This pictorial representation can help to translate dietary theories into practice through its image clarity and accessibility. Studies show that brightly coloured images of food and the sections, raise awareness among people with less reading ability, and also caters to all ages, including children and seniors. It is a scientific tool focused on behavioural change that will encourage individuals to eat mindfully and have control of their portion sizes.

Historical background of dietary guidelines in India

There has been a major evolution in the dietary guidelines issued by the Indian Council of Medical Research (ICMR) since the 1970s, when it was first published as the basic dietary guidelines. In the coming decades, it became more sophisticated by including visual aids such as the food pyramid; however, this was found to be lacking clarity (FAO, 2023) ^[23].

Due to the public's demand for greater comprehension, the National Institute of Nutrition and ICMR discovered "My Plate for the Day" in 2024. This representation shifted from suggestions to a deeper comprehension by illustrating the ratios of various foods that might be on the plate in a typical Indian meal.

“My Plate for the Day” thus offered a practical and successful incentive for encouraging beneficial changes in people’s meals by combining traditional Indian dishes with scientific suggestions (Iqbal, 2024) ^[5].

This shift from text or pyramid-based models to the plate method has resulted in a greater understanding of nutrition communication, that is, simple for the general public to understand. (NIN, 2020) ^[12].

Need for the development of the “My Plate” concept

This changing dietary scenario, marked by low dietary diversity and the preponderance of staple foods like cereals, has led to micronutrient deficiencies and diet-related NCD risk. The dietary scenario of the Indian people, marked by the presence of diverse food habits in season-specific dietary practices, is now giving way to regulated food intake practices. Studies report that the present population of India derives nutrients from merely 4 to 5 food groups in a day, risking deficiencies, as the minimum required for healthy living is between 8 to 10 food groups. This lack of diversity in food intake has resulted in an increase in the occurrence of non-communicable diseases among the younger population as well as the farming population (Hemalatha, 2024) ^[4].

A study of Indian women found moderate dietary diversity scores, and emphasized the importance of adequate micronutrient intake, especially iodine, in the prevention of endocrine disorders such as hypothyroidism, and the need for practical balanced diet models such as “My Plate for the Day” (Budhalakoti and Kulshrestha, 2017) ^[1].

There is thus an immediate need to advocate the “My Plate for the Day” policy at the household and community levels to restore dietary balance and prevent disease. This model advocates sourcing micronutrients and macronutrients from a wider array of food groups to address health concerns. In addition to addressing contemporary health issues by raising awareness and giving priority to “My Plate”, the concept will enable people to make better food choices that are more in line with India’s rich nutritional legacy (Rahman *et al.*, 2024) ^[17].

Scientific basis and nutritional recommendations

The food plate graphic shows how much we should eat in proportion to our daily intake of core food groups: cereals,

pulses, vegetables, fruits, milk, nuts/seeds, fats/oils, and animal products or substitutes. The aim is to encourage people to consume at least eight food groups each day to get the nutrition they require (NIN, 2024) ^[13].

The Model provides a framework to help individuals and communities reduce the effects of ‘hidden hunger’ and long-lasting or chronic disease by discouraging the use of supplements or highly processed foods. The Model promotes the consumption of unprocessed or whole foods (including a diverse range of food types) as well as traditional Indian diets that support optimal nutrition and nutrient absorption. The Model was designed to be practical, which means that the materials can be utilised daily for individuals within a community to assist them with making healthy food selections to promote health across all stages of life (Passi, 2024) ^[14].

On the plate, there are a variety of food groups representing each group of foods required to meet an individual’s daily nutrient needs as specified in the new recommended daily allowance (RDA) by the National Institute of Nutrition in India. The recommended amounts for a 2,000 Kcal per day average diet would include 250 g of cereals (with a minimum of 50% whole grains), 400 g Vegetables, 100 g of Fruits, 85 g of Pulses/Eggs/Meat, 35 g Nuts, and 27 g of fats/oils, with a limitation on highly refined sugar and processed foods (Times of India, 2024) ^[18].

The use of millets, various types of legumes, and Plant Proteins represents the Agricultural diversity in India and provides a large number of health benefits when it comes to Sustainable diets. Specifically, Millets are known to have very high micronutrient density, antioxidant characteristics, Antioxidant characteristics and positive effects on gut health. The plate recommends that 30-40% of the amount of cereals be made of Millets & Whole Grains (NIN, 2024) ^[13].

The intention of this approach is both to achieve maximum adequacy and bioavailability of nutrients as well as strengthen culturally accepted traditional food practices that are specific to the geographic area in which they are made. Together, these recommendations are based on scientific evidence from multiple sources, including expert panels that have evaluated the evidence, and are based on results of national nutrition surveys and national and international health and nutrition records (Passi, 2024) ^[14].

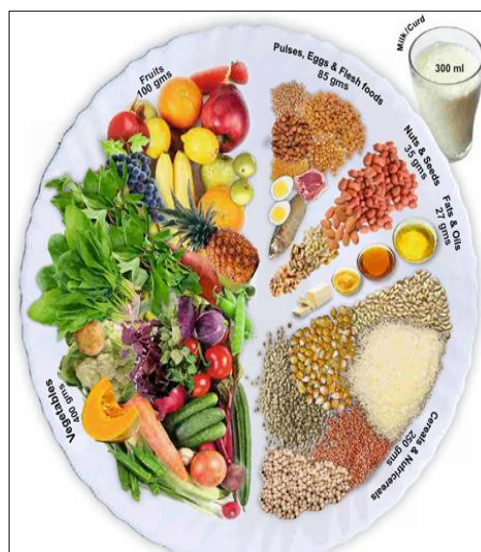


Plate 1: “My Plate” for an adult man (NIN, 2024) ^[13].

Table 1: Nutrient composition of “My Plate for the Day”

Food groups (2000Kcal)	Raw weight of foods to be consumed (g/day)	% of energy derived from each food category per day (Kcal)	Overall energy from each food category per day (g)	Total crude protein for each food group per day (g)	Total fat per food group per day (g)	Total carbohydrates per food group per day (g)
Cereals (Including millets)	250	42	843	25	5	172
pulses	85	14	274	20	3	42
Dairy (ml)	300	11	216	10	13	16
Vegetables: green leafy vegetable (GLV)	400	9	174	10	2	28
Fruits	100	3	56	1	1	11
Nuts and seeds	35	9	181	6	15	6
Fats and oils	27	12	243	0	27	0
Total	1200	-	2000	72g (15% of total energy (Kcal) from protein)	66g (30% calories (Kcal) from overall fat)	(55% energy (Kcal) from total carbohydrates)

- For non-vegetarians, eggs, fish, or meat can be used as substitutes for a portion of pulses in the diet. (NIN, 2024) ^[13].

Educational applications of “My Plate”

The “My Plate for the Day” model provides an excellent resource for educating Indian citizens about proper nutrition and helps them to make healthier food choices through numerous outreach efforts. Schools use this model as part of their health promotion programs for children. The model is also being used in the classrooms of the schools, and the schools are also encouraging the formation of nutrition clubs and using the model in the midday meal programs to educate the children about the importance of eating a balanced diet. The importance of eating a variety of foods to reduce the risk factors of non-communicable diseases is also a part of the school health programs, and this is a strategy developed in response to the increasing number of children suffering from obesity, as per the Indian Council of Medical Research and the National Institute of Nutrition, and is a part of the strategy developed by Hemalatha (2024) ^[4]. Integrated Child Development Services (ICDS) and Anganwadi Centres utilise ‘My Plate’ graphics to provide information to pregnant and breastfeeding women and the parents of young children about the balanced diets that are appropriate for each age category, as well as the types of foods included within each category, based on their local culture or tradition. Additionally, through food demonstrations and the provision of supplementary nutrition, the concept of ‘My Plate’ is extended to the community level, allowing individuals to apply ‘My Plate’ during their daily lives (Praveen *et al.*, 2025) ^[15]. Nutrition/hygiene educators also use ‘My Plate’ educational materials-for example, posters and flipcharts-to educate rural and urban residents about understanding proportions of various Food Groups; encouraging individuals to grow vegetables and herbs in their home gardens; and increasing dietary/lifestyle awareness among various segments of society, including the farming community (Ubbes *et al.*, 2024) ^[19]. India's efforts to improve nutrition are represented by the National POSHAN Abhiyaan (Prime Minister's Overarching Scheme for Holistic Nutritional Improvement). The POSHAN Abhiyaan includes 'My Plate' and incorporates it into their e-learning materials, community mobilization initiatives, as well as training of its front-line workers to help young women and children deal with

malnourishment, hidden hunger and lack of dietary diversity (GOI, 2024) ^[3].

Impact of the tool

Today “MyPlate” model is recognised worldwide as an effective tool for nutrition education and is used to visually show proper ratios of food groups to develop and maintain healthy dietary behaviours. Studies suggests that the application of the research-based “My Plate” approach in educational interventions may have a beneficial impact on nutritional knowledge and foster positive changes in nutritional behaviours, such as fruit and vegetable intake and the overall quality of the adult and child diet (Zakerkish *et al.*, 2022) ^[21]. A randomised clinical trial conducted on adults diagnosed with type 2 diabetes and lasting 12 weeks found that the application of the “My Plate” approach in the delivery of nutritional education had a beneficial impact on the glycemic control, lipid, and inflammatory profiles. This revealed that “My Plate” is effective in the long-term treatment of individuals with diabetes and that its use may be beneficial for patients with chronic diseases. Moreover, the results of another systematic review determined that “My Plate” has been well-received across all populations due to its user-friendly nature (provided by its simple, pictorial representation of portion sizes). Its positive impact on the increased level of nutrition knowledge, and an improvement in dietary habits, particularly in terms of increased consumption of fruits and vegetables have been reported (Jia *et al.*, 2022) ^[6]. Regular, plate-based visual reinforcement (such as My Plate) has improved the dietary behaviours, knowledge and attitudes of adolescents in India using Behavioural Change Models through School and Community-Based Interventions (Moitra *et al.*, 2021) ^[10].

The plate-based visual aids are inexpensive and continues to be used by the same population for an extended period of time, reaching much larger audiences at a relatively low investment in the Slum Population's Nutrition Programs and Health Education Studies (Kumar and Joe, 2020) ^[8] than those who have not been exposed to these sources of education and resources in general. In particular, when nutrition clubs, digital resources, and interactive teaching methods have been used as a community-based intervention, there has been a significant Benefit-Cost Ratio when compared to also utilization of previous community-based programs to create the same outcome. Visual dietary education models like “My Plate” may be particularly useful for hostel residents and college students, who generally have

fast food and irregular eating habits (Monika *et al.*, 2015)^[11]. In summary, research literature consistently supports “My Plate” as a clear, practical, and effective nutrition education tool to promote healthy eating habits, dietary knowledge, and support positive health outcomes.

Outcome of the popularisation

When multiple agencies like education, health, social welfare, and agriculture work together in this regard, it will bring about multiple benefits. The first benefit will be that households and communities will be able to eat a more diverse range of foods and will become more aware of the benefits of healthy eating (WHO, 2025)^[20]. Another benefit is that the number of overweight and obese people in society will reduce due to the measures being put in place to improve their diet and increase their level of exercise. There will also be a reduction in diet-related non-communicable diseases like diabetes, heart disease, and hypertension due to better diet and exercise. Increased engagement of communities in nutrition and physical activity programs, as a result of improved communication and collaboration among multiple ministries and government agencies, will create an environment that supports sustainable health-promoting behaviours for people of all ages (Madhu *et al.*, 2025)^[9].

Challenges in implementing

While “My Plate” is a standard approach to healthy eating, the standardised plate does not cater to the varying needs of different individuals and groups, including children, seniors and athletes. Recent research has shown that the recommendations of “My Plate” do not take into account variations in nutrient needs associated with a person's age, health status, levels of physical activity and metabolic rates, particularly for older adults and those who have unique dietary needs (for example, seniors, athletes or children) (Khandelwal *et al.*, 2020-2025)^[7].

The economic evidence presented regarding the diet in India indicates that the most common food groups of “My Plate” (e.g., Fruits and Dairy/Nuts) are very expensive for low-income families. In fact, research shows that a nutritious diet may cost between 50%-90% of daily rural wage incomes, making it difficult for poorer families to consistently meet “My Plate” dietary guidelines (Raghunathan *et al.*, 2021)^[16].

Besides, health workers/nutrition educators need structured training on nutrition science and nutrition communication in order to effectively utilise and promote the plate-based dietary models.

The way ahead

In order that 'My Plate for the Day' concept be implemented, it must be more intensely implemented through multivariate convergence amongst governmental and multiple-stakeholder agencies, thus providing for complete health promotion at all levels of society. With respect to the Ministry of Human Resources and Education, this means that schools will be required to introduce the “My Plate For The Day” in their policy. This will benefit students by increasing their knowledge of nutrition, and at the same time provide them with additional Playgrounds and physical activity spaces, which also need to be encouraged for physical activity and fitness, in an effort to reduce the incidence of overweight and obesity in school-aged

children, through the promotion of active lifestyles and healthy meals in school settings. For example, the "Active Schools" program and Nutrition Clubs, including the Oorja Club initiative, can be additional means to reinforce healthy eating and active living for Children. (Hemalatha, 2024)^[4]. The active adoption of the "My Plate for the Day" policy in India, along with the development of infrastructure for physical activity and the "Eat Right" (Health, Nutrition, and Physical Activity) movement can provide a strong foundation for improving nutritional status and reducing malnutrition and lifestyle-related diseases through the alignment of multiple ministries and agencies (GOI, 2024)^[3].

Conclusion

The success of this model can be strengthened even more by using it in State Nutrition Programs (SNAPs), as well as by adapting the model for different ages, physical development stages, and regional eating patterns. The creation of a structured program of training for trainers, health professionals and caregivers, as well as collaboration between multiple sectors of society, will assist in implementation, adherence to the model, and creating sustainable changes in eating habits. This ability to connect research on diets with education and outreach, and through the creation of policy initiatives, will create a significant opportunity to change dietary behaviour, improve health and nutrition outcomes and promote health and food security in India.

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