

The Making of Modern Nutrition Science in India: Institutional Contributions of the National Institute of Nutrition (NIN), 1906–1974

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Abstract :

The last few decades have witnessed flowering of interest in the history of modern science in colonial and post colonial India. The study of the knowledge forms of non-western societies is a rapidly emerging research field that could have a lasting impact on the disciplinary history of science.¹ This paper examines the nature of the development of modern nutrition science in India between 1906 and 1974, with particular emphasis on the institutional role of the National Institute of Nutrition (NIN). Beginning as a modest ‘Beriberi Enquiry Unit’ under Sir Robert McCarrison, the institute evolved into a premier research body shaping nutritional policies and scientific understanding across colonial and postcolonial India.

This paper scrutinizes key phases of maturing, including colonial research priorities, the blossoming of deficiency disease frameworks, post-independence expansion, and the institutionalization of public health nutrition. It argues that NIN played a foundational role in transforming nutrition into a scientific discipline and a policy instrument in India.

Key Words : Nutrition Science, Colonialism, Post-Independence, Institutionalisation

Introduction :

The National Institute of Nutrition (NIN), headquartered in Hyderabad, stands as one of India’s oldest and most influential institutions in the field of nutrition science and public health. Its history, spanning from 1906 to 1974, mirrors the evolution of nutrition as a scientific discipline in India. Established during the colonial period to investigate deficiency diseases, the institute gradually expanded into a multidisciplinary research centre shaping national health policies and programs. The growth of NIN is inseparable from the pioneering efforts of Sir Robert McCarrison, whose vision laid the foundation for nutrition research in India. Over the decades, the institution transformed from a small experimental unit into a premier national institute, contributing significantly to addressing malnutrition, developing dietary standards, and guiding public health interventions.

After independence, the National Institute of Nutrition became an important instrument of the Indian state in addressing widespread malnutrition and food insecurity. Under the leadership of eminent scientists such as Dr. W. R. Aykroyd, Dr. V. N. Patwardhan, and especially Dr. C. Gopalan, the institute expanded its research activities and emerged as a global centre for nutritional science. NIN conducted large-scale dietary surveys, developed Recommended Dietary Allowances (RDAs), investigated protein-energy malnutrition, and contributed to public nutrition programmes such as the ‘Mid-Day Meal Scheme’ and ‘Integrated Child Development Services (ICDS)’.

Modern nutrition science played a crucial role in shaping India's national identity, with a strong emphasis on evidence-based public health nutrition, the eradication of malnutrition, and the promotion of food security. Western-style modern nutrition research institutions expanded significantly across South and Southeast Asia during the colonial period. Notable examples include the Pasteur Institute in Saigon (1891), the Eijkman Institute in Batavia (1888), the Institute for Medical Research in Kuala Lumpur (1900), the Bureau of Science in Manila (1901), the Pasteur Institutes at Coonoor (1907), Pasteur Institutes at Shillong (1915), Pasteur Institutes at Kolkata (1900), the Central Research Institute at Kasauli (1911), and the Nutrition Research Laboratories (1928). These institutions were established to generate scientific knowledge and conduct research on deficiency diseases, climate-related illnesses, vitamin deficiencies, and food hygiene. Through laboratory investigations and field surveys, they contributed to the identification of nutritional disorders and the development of preventive strategies.

As colonial authorities undertook nutritional exploration and interpretation, they adapted and reshaped these imperial scientific institutions to align with administrative priorities and economic interests. In doing so, they not only advanced biomedical research but also integrated nutrition science into broader frameworks of public health, governance, and colonial control.

Colonial biomedical researchers examined the physical and biological diversity of India's population and environment, transforming previously unfamiliar regions and their nutritional characteristics into systematically documented knowledge. Through extensive surveys, field studies, and statistical analyses, they generated data of both imperial and international significance. Their work reflected a dual process: an effort to understand and control the varied Indian environment, and a selective engagement with indigenous dietary practices. These studies also considered the impact of environmental change on health and nutrition, contributing to the emergence of field-based investigations into India's nutritional conditions.

The contributions of colonial scientists, who formulated early frameworks for understanding India's nutritional structure, are extensively documented in the records, memoirs, and annual reports of the National Institute of Nutrition (formerly the Nutrition Research Laboratories). These sources provide valuable insight into the development of nutrition science within the broader context of colonial public health and governance.

Present article explores the nature of nutritional and dietary studies in India during British rule, highlighting the interests and activities of colonial scientists involved in this field. It identifies the key individuals who contributed to these investigations and examines how the diverse dietary patterns of India were understood and conceptualized by British and European nutritionists in the nineteenth century.

The development of nutrition science in the first half of the twentieth century in India is analyzed through the work of Sir Robert McCarrison, one of most prominent colonial nutritionists. As Director of the Nutrition Research Laboratories from 1928 to 1935, McCarrison played a significant role in shaping nutritional research in colonial India.

His work and interactions provide valuable insights into the functions and priorities of colonial science.

The article further explains how modern nutritional studies evolved under colonial constraints, with the colonial government actively encouraging researchers to conduct surveys and promote specific approaches to nutrition science. It also shows that colonial scientists were often pressured to carry out rapid dietary investigations to fulfil colonial administrative and economic needs.

Finally, the article discusses the development of nutritional studies in postcolonial India, particularly under the National Institute of Nutrition. It highlights the institute's role in shaping government health policies by providing systematic and scientific information about the country's nutritional and dietary conditions.

Tracing the Early Phase of Nutritional Studies in India

Nutrition science is generally defined as the scientific study of food, nutrients, and other ingestible substances, and their effects on the structure, function, growth, metabolism, and overall health of the human body. It examines the relationship between diet and physiological processes, with particular emphasis on health promotion, disease prevention, and human well-being.

Modern research has shown that, during the pre-colonial period, India's indigenous communities possessed a rich and sophisticated understanding of nutrition and dietary practices. Ancient Indian philosophical and religious texts reveal that food was not merely regarded as a material necessity, but as a fundamental source of life, health, and spiritual well-being. The *Brihadaranyaka Upanishad* and the *Taittiriya Upanishad* describe food as the ultimate reality, divine in nature, and the supreme cosmic energy that sustains all living beings. In Indian cultural tradition, food has long been considered sacred and is often expressed through the concept of "*Annam Brahma*"—meaning "Food is God." This philosophical outlook reflected a holistic understanding of nutrition, health, nature, and human existence in ancient India.

Ancient Indian Ayurvedic texts such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Sangraha* provide rich and systematic knowledge regarding nutrition, diet, and health. These classical works discussed the definition and nature of food, the qualities and properties of different food substances, methods of food processing (*Karana*), combinations of food items (*Samyoga*), appropriate quantity of food (*Rashi*), the geographical origin of food (*Desha*), suitable timing of meals (*Kala*), and rules governing food intake (*Upayoga Samstha*).

They also emphasized hygiene, the role of water in maintaining health, the influence of emotions and mental state on digestion, the effects of sound and environment during eating, dietary guidance for healthy living, oral hygiene, and recommended activities after meals. Furthermore, these texts explained the relationship between nutrition and behavioural qualities through the classification of foods into *Sattvik*, *Rajasic*, and *Tamasic* categories. Seasonal and climatic dietary regimens were also elaborately described to

maintain bodily balance and well-being. These examples demonstrate that ancient Indian society possessed a sophisticated and indigenous body of nutritional knowledge, which connected food, health, environment, and human behaviour in a holistic manner.

Historians and scholars of Medieval India such as K. S. Lal, K. M. Ashraf, A. L. Srivastava, Om Prakash, John F. Richards, and others have highlighted that medieval Indian society possessed a rich and sophisticated understanding of food, diet, and health. During this period, indigenous Indian traditions interacted with Central Asian and Persian cultural practices, leading to the evolution of a composite nutritional culture. This cultural synthesis encouraged the development of knowledge regarding protein-rich and energy-dense foods, the role of nutrition in physical strength and social well-being, and the importance of diet in the prevention of diseases.

Their studies further suggest that local theories of nutrition and health evolved in accordance with regional environments, agricultural practices, and cultural traditions. Archival records, literary texts, medical treatises, and court documents from medieval India reveal that indigenous communities possessed systematic and practical knowledge about nutrition and its effects on the human body. This knowledge formed an important part of everyday life, medical practice, and public health traditions in medieval Indian society.

Although food and nutrition have been discussed for centuries in medical, religious, and cultural traditions, modern nutritional science is a relatively young discipline. Its scientific foundations, began to emerge only in the late nineteenth and early twentieth centuries in European metropolis with the discovery of vitamins, minerals, calories, and the physiological role of nutrients in human health. The development of laboratory research, biochemistry, and public health studies transformed traditional dietary knowledge into an evidence-based scientific field. Since then, nutritional science has evolved rapidly, focusing on the relationship between diet, health, disease prevention, and human development.

Modern nutritional studies emerged in India under colonial rule. In India nutrition science developed as a government sponsored science and its aims were decided on the field of economic, military and administrative profit. Colonial Government increasingly became concerned about the health, physical capability, productivity of the Indians for fulfilling their own interests. Repeated famines, widespread poverty, spread of infectious diseases and military concerns pressured the colonial state to pay greater attention to diet and nutrition. During the late eighteenth and nineteenth century most of research papers or informative articles, which were published in Asiatic Researches, Gleanings in Science, The Journal of the Asiatic Society, focused on epidemic diseases such as cholera, plague, malaria, small pox etc.² Simultaneously, colonial scientists also concentrated on publishing articles about local weather conditions and their relationship with the spread of diseases. During the late nineteenth century, many articles and reports were published in the 'The Indian Medical Gazette' regarding cholera, smallpox, different types of fevers, vaccination, accidents, snake bites, dysentery, cataracts, and other health-related issues.³ However, these researchers, doctors, and investigators did not pay much

attention to accumulating systematic knowledge about nutritional cycles or their relationship with the health of the Indian population.

During the late nineteenth and early twentieth centuries, European researchers discovered and developed the theory of vitamins, which significantly transformed the understanding of deficiency diseases such as scurvy, beriberi, rickets, and others. This discovery helped scientists to identify the relationship between nutritional deficiencies and human health. Richard D. Semba has shown that the discovery of vitamins was a major scientific achievement in our understanding of health and disease.⁴ In a research paper, Manfred Eggersdorfer, Dietmar Laudert, and Ulla Letinois mentioned that the discovery of vitamins had a dramatic impact on human societies as well as on economic development.⁵ Their study suggests that advances in vitamin research significantly improved public health, reduced deficiency diseases, enhanced productivity, and contributed to social and economic progress.⁶ The journey of the major discovery of vitamins began in the early nineteenth century and ended at the mid-twentieth century. During this period researchers recognised scurvy, beriberi, rickets, pellagra and xerophthalmia as specific vitamin deficiencies, rather than diseases due to infections or toxins.

Simultaneously, large-scale Western-style nutritional observations and research developed in India during the first half of the twentieth century. These studies expanded significantly and became more systematic during the second half of the twentieth century, leading to the institutionalization of modern nutrition science, the growth of public health nutrition programmes, and the establishment of specialized research organizations in India. During the early twentieth century, various articles on nutrition and the dietary systems of India were published in *The Indian Medical Gazette*. These publications discussed food habits, dietary deficiencies, public health, famine conditions, infant nutrition⁷, economy of nutrition, prevention of malnutrition and the relationship between nutrition and disease, thereby contributing to the development of nutritional research in colonial India.⁸

The Institutional Evolution of Nutrition Science in India: the Role of Sir Robert McCarrison and the Royal Commission of Agriculture

The growth of nutritional knowledge during the early period helped in the establishment of institutions such as the Pasteur Institute and the Nutrition Research Laboratories. In the year 1906, the Pasteur institute was established in Coonoor, located in the Nilgiri hills of South India primarily with twofold objectives - firstly, advancing the production of anti-rabies vaccine, secondly, to develop a system for the treatment of patients with rabies.⁹

The antecedents of nutritional studies in twentieth-century India perhaps lie first and foremost in the pioneering nutritional survey research conducted by Sir Robert McCarrison between 1918 and 1935. He made significant contributions to the development and popularisation of nutritional studies in India. After completing his medical studies in Ireland in 1900 at the age of just twenty-two, he joined the Indian

Medical Service the following year and was posted as Medical Officer to Indian troops guarding the mountains of Northern Frontiers.¹⁰ Primarily, he was appointed as a medical surgeon of British Indian Army who worked in extensive regions of Central Asia, Afghanistan, Eastern Turkistan, Bukhara, the eastern Hindu Kush, the Karakoram, the Dora Pass, and other frontier areas¹¹. During this period he pointed various nutritional issues of the people of British India's Northern Frontier. Between 1900 and 1935, he served in various positions in the Indian Medical Service, including Surgeon, Major, Lieutenant General, and Major General. During this period, he played two important roles. First, as a Medical Officer and later as an administrator of the British Indian Army, he attempted to develop medical infrastructure for the troops and highlighted the basic health problems of both European and Indian soldiers. On the other hand, as a medical practitioner and a believer in the contemporary European ideals of the pursuit of knowledge and truth, he extended his research to understand the causes of diseases arising from nutritional deficiencies among the Indian people. His nutritional research conducted there was published in numerous scientific papers and nine books.¹² He was recognised as the father of nutrition research in India.¹³

In 1918, Major-General Sir Robert McCarrison established a small laboratory within the compound of the Pasteur Institute, Coonoor, dedicated to the study of beriberi and other nutritional deficiency diseases. This unit became popularly known as the Beri-Beri Enquiry Unit and later evolved into the National Institute of Nutrition (NIN) India. He established this unit in an empty room of the Pasteur Institute building with the help of one untrained assistant and very limited equipment.¹⁴ During this period Colonial Government did not pay much of their attention for the development of the science of nutrition in India. During that period, the Beri-Beri Enquiry Unit struggled with severe financial challenges. Lacking adequate and systematic government funding, constructive nutritional research could not truly develop in India. McCarrison was recalled to Britain in 1920 and was invited in various scientific academy in USA for delivering his research works on goitre. W. R. Aykrood, who served as the Director of The Nutrition Research Laboratories in India from 1935 to 1945, wrote : 'The work of the Beri-Beri Inquiry proceeded until January 1920, when McCarrison was invalided home to England. There he was soon joined by his assistant, Sub-Assistant Surgeon Mula Singh, who was given some further training in oxford in histological techniques. His research work, particularly his investigations of the problems of goitre, had become widely known, and in 1921 he was invited to deliver a series of lectures in the USA., amongst which were the de Lamar Lecture in Baltimore, the Mellon Lecture in Philadelphia, a Mayo Foundation Lecture in Rochester, and the Mary Scot New bold Lecture in Philadelphia.'¹⁵

McCarrison returned to India in 1922 for resuming his work on nutritional studies. However, in November 1923, the British Raj recommended the closure of the Beri-Beri Enquiry Unit at Coonoor because they were not satisfied with the activities of the unit at that time.¹⁶ However, the real reason behind the Government's decision was

economic in nature. The colonial administration was unwilling to invest sufficient funds in nutritional research and investigations in India. In 1925, the Beri-Beri Enquiry Unit of Coonoor received permission from the Government to resume its activities on nutritional studies under a new name, the “Deficiency Disease Inquiry.”¹⁷ The economic value of the nutritional investigations proved of immediate concern to the colonial masters. In the late 19th and early 20th century British colonial medical officers and some amateur colonial scientists were tried to identify the diseases caused by malnutrition. However these work were little more than sporadic reconnaissance with natural history. A definite shape however emerges in 1926 when the British Government appointed the Royal Commission on Agriculture (also known as the Linlithgow Commission) for investigating, scrutinizing and reporting on the condition of agriculture and rural economics in British India. This Committee stands as a milestone in the evolution and institutionalisation of nutritional studies in India because, for the first time, it raised the question of establishing a central repository and an institution devoted solely to the study of nutrition in India. And also for the first time was raised the question about the importance of employing trained nutritionists or professional investigator to investigate technical problems regarding nutrition.

Perhaps it can be said that the history of nutritional studies in India cannot be separated from the wider colonial agricultural and public health policies of the British Raj. During the late nineteenth and early twentieth century's, British administrators, medical officers, agricultural experts, and scientific researchers gradually began to recognise the close relationship between agriculture, food production, nutrition, and public health. In this context, the Royal Commission on Agriculture in India (1926–1928) played a pivotal role in constituting the discussion on agricultural progress, rural poverty, food supply, and nutritional conditions in colonial India. Simultaneously, it may also be said that the Commission was formed at a time when India was confronting severe agricultural stagnation, recurring famines, food insecurity, malnutrition, and widespread rural indebtedness. Simultaneously, scientific investigations on deficiency diseases such as beriberi, scurvy, pellagra, and rickets were expanding rapidly across the world. These developments encouraged colonial rulers in India to undertake systematic nutritional and biomedical investigations. The Royal Commission on Agriculture indirectly contributed to the institutionalisation of nutritional science in India by highlighting the poor dietary conditions of the rural population, the low productivity of Indian agriculture, and the urgent need for scientific agricultural reforms. Although the Commission primarily focused on agriculture, its observations created an important intellectual and administrative base for later nutritional investigations in India.

One of the most important contributions of the Royal Commission was its recognition of the relationship between agricultural backwardness and poor nutrition. The Commission monitored that a large section of the Indian rural population consumed insufficient and nutritionally imbalanced diets. Most peasants depended heavily on cereals such as rice, wheat, millet, or maize, while the intake of proteins, milk, fruits, vegetables,

and animal products remained extremely low. The colonial economy encouraged the commercialisation of agriculture and the cultivation of cash crops such as jute, cotton, tea, indigo, and opium. Consequently, many fertile lands were diverted away from food crop cultivation. This process often reduced local food availability and contributed to nutritional deficiencies among rural communities. The Commission also pointed out that low agricultural income limited the purchasing power of peasants. Even when food was available in markets, poor cultivators frequently lacked the economic capacity to obtain balanced diets. In many regions, seasonal unemployment and indebtedness further intensified malnutrition. Deficiency diseases became increasingly visible during this period. Beriberi, associated with vitamin B deficiency, was common among populations dependent on polished rice. Pellagra and anaemia affected many poor communities, while protein deficiency and chronic undernourishment weakened the physical condition of large numbers of people. These conditions gradually attracted the attention of colonial medical researchers. The Royal Commission helped to strengthen the idea that agriculture and nutrition were interconnected fields. Food production was no longer viewed merely as an economic activity; it became increasingly associated with public health and national efficiency. The Commission recommended improvements in crop diversity, animal husbandry, dairy production, irrigation, and agricultural education. These reforms had potential nutritional implications because diversified agriculture could increase the availability of proteins, vitamins, and protective foods.

The Committee suggested that the Government undertake an intensive study of malnutrition as a cause of physical inefficiency and ill health among the masses of India. They visited the laboratory of the Deficiency Disease Inquiry Unit at Coonoor to understand the activities of Colonel McCarrison and to examine the detailed evidence preserved in the nutrition laboratory. They fully appreciated McCarrison's views on the impact of nutritional surveys on agricultural research. In their report it was mentioned that: 'The importance of Colonel McCarrison's work from the point of view of our inquiry is the emphasis which he lays on malnutrition as a problem facing those engaged in agricultural research. He points out that the ultimate aim of the investigator of disease and the agricultural worker is the same, that is, the adequate nutrition of the people. He insists therefore, that there should be the closest Co-operation between them to the mutual advantage of both.'¹⁸

The Committee had also advised to improve the studies regarding malnutrition of domestic animals. By acknowledging McCarrison's emphasis on expanding nutritional surveys for both humans and animals in the Indian subcontinent, the Committee proposed the establishment of institutions for nutritional studies for both human and non-human communities. In their report the Committee mentioned that: 'The causes underlying the malnutrition of domestic animals are often similar in character to those underlying malnutrition in human being. It is therefore, desirable that work on human nutrition and on the nutrition of farm animals should be carried out, if not in the same laboratory, at least in the closest co-operation, or in other words, that there should be team work by workers with a knowledge of different branches of the science of nutrition

and also continuity of work. It may be remarked that, at the Rowett Research Institute at Aberdeen, the research work into animal nutrition and that on human nutrition are going on side by side, and the Director of that Institute gave it as his opinion that it was very important that both lines of research should be carried on in the same institute because the fundamental principles of human nutrition and of the nutrition of farm animals are the same.’¹⁹

Colonel McCarrison helped the Committee to understand the close connection between deficiency diseases and agricultural research. He also strongly emphasised on the significance for popularising nutritional values in India. At last in their report in 1928, the Committee suggested the Government to take important steps for developing a central institute for researching deficiency diseases. During this time the Colonial Government paid their focus for systematic blooming nutritional research in India because the British colonial administration approached nutritional studies from multiple perspectives. On one hand, nutritional investigations were linked with humanitarian concerns regarding public health. On the other hand, they were also connected with imperial administrative and economic interests. Colonial authorities recognised that malnutrition reduced labour productivity, weakened soldiers, and affected economic efficiency. Nutritional research therefore became important for improving the health of industrial workers, plantation labourers, prisoners, and military personnel. Consequently, in 1929, the Deficiency Diseases Enquiry was reorganised into the Nutrition Research Laboratories (NRL), with McCarrison as its first Director. He continued as Director until 1935.

As Director, McCarrison played a pivotal role in the establishment and development of the Nutrition Research Laboratories (hereafter NRL). From the outset, he emphasized two key objectives: the formulation of a clear institutional mandate and the improvement of research infrastructure. He was also instrumental in promoting both basic and applied nutritional research in India. Under his leadership, the laboratory undertook investigations into a number of important health problems, including anaemia, epidemic dropsy, scurvy-oedema, beriberi, gastric tumours, gastrointestinal disorders, and bladder stones, with the aim of understanding their nutritional causes and implications.²⁰

The period from 1928 to 1935 was one of steady growth for the Nutrition Research Laboratories. The scientific staff was strengthened through the appointment of two qualified Indian researchers, S. R. Ranganathan, a chemist, and G. Sankaran, a biochemist. McCarrison also benefited from the services of Sub-Assistant Surgeon B. G. Krishnan, who had been among his earliest assistants and had remained associated with the research unit throughout its formative years.²¹ To meet the growing needs of the institution, additional subordinate staff, including attendants and support personnel, were recruited and trained. More rooms were acquired within the Pasteur Institute and equipped with modern scientific apparatus. During this period, the Nutrition Research Laboratories developed into a recognized and firmly established institution, making significant contributions to the advancement of nutritional research in India.

The Nutrition Research Laboratories during the Late Colonial Period: W. R. Aykroyd and the Rise of Indian Nutritionists

The late colonial period marked a significant phase in the development of nutritional science in India. Following the pioneering work of Sir Robert McCarrison, the Nutrition Research Laboratories (NRL) entered a new stage of institutional growth and scientific expansion under the leadership of W. R. Aykroyd. He was appointed as the Director of the NRL in 1935. As a Director of NRL, he played a crucial role in broadening the scope of nutritional investigations and integrating nutrition research with public health policy.

Aykroyd emphasized the study of malnutrition as a major public health problem affecting large sections of the Indian population. Under his guidance, the NRL shifted its focus from the investigation of specific deficiency diseases to wider studies of dietary habits, nutritional requirements, food consumption patterns, and the relationship between nutrition and socio-economic conditions. His research highlighted the prevalence of protein-energy malnutrition, vitamin deficiencies, and inadequate dietary intake among various communities in India.

One of Aykroyd's most important contributions was the promotion of large-scale nutritional surveys. These surveys generated valuable data on the nutritional status of different regions and social groups, providing a scientific basis for future nutrition policies. He strongly advocated the view that India's health problems could not be solved solely through medical treatment but required improvements in diet, agriculture, food production, and public education.

The period also witnessed the growing participation of Indian scientists in nutritional research. Researchers such as S. R. Ranganathan, G. Sankaran, V. N. Patwardhan, N. A. Siddiqui, and several others made important contributions to the study of food composition, vitamin deficiencies, dietary standards, and nutritional physiology. Their work helped transform the NRL from a small colonial research unit into a leading scientific institution with an increasingly Indian character. Indian nutritionists played a vital role in conducting field investigations, laboratory experiments, and nutritional surveys across the country. They expanded knowledge regarding indigenous food resources, regional dietary practices, and the nutritional problems faced by rural and urban populations. Their findings contributed significantly to the formulation of dietary recommendations and public health interventions in the final decades of British rule.

The collaboration between W. R. Aykroyd and Indian nutritionists strengthened the institutional foundation of nutritional science in India. By the 1940s, the Nutrition Research Laboratories had emerged as a nationally and internationally recognized centre for nutrition research. The scientific knowledge generated during this period laid the groundwork for post-independence nutrition programmes and eventually contributed to the evolution of the NRL into the National Institute of Nutrition (NIN). Thus, the late colonial period represented a crucial transitional phase in the history of Indian nutritional science, characterized by institutional consolidation, increased participation of Indian

researchers, and the growing recognition of nutrition as a central component of public health and national development.

Transition from Colonial to National Institution after Independence :

India's independence in 1947 transformed the priorities of nutrition research. The newly independent Indian state considered nutrition essential for nation-building, economic development, and public welfare. Malnutrition was viewed as both a public health problem and a developmental challenge. In 1949, the Indian Research Fund Association (IRFA) was reorganised as the Indian Council of Medical Research (ICMR). Under ICMR, the Nutrition Research Laboratories expanded considerably. Dr. V. N. Patwardhan became the first Indian Director of NRL. Under his leadership, Indian scientists increasingly replaced colonial personnel and reoriented research towards national priorities. The institute focused on child malnutrition, protein deficiency, maternal health, and food production.

The post-independence government also initiated several committees and commissions related to nutrition. The Bhole Committee had earlier emphasised the importance of public health and nutrition in independent India. Based on these recommendations, the institute was shifted from Coonoor to Hyderabad in 1958 to facilitate expansion and better integration with national health programmes. The move to Hyderabad marked a major institutional transformation. The institute acquired larger facilities, expanded laboratories, and increased collaboration with universities and government departments. Nutrition research became increasingly multidisciplinary, involving biochemistry, physiology, epidemiology, statistics, and social sciences.

The most significant phase in the history of NIN occurred under the leadership of Dr. C. Gopalan. Often regarded as the architect of modern nutrition science in India, Gopalan transformed NIN into an internationally respected institution. Gopalan's research focused on protein-energy malnutrition, micronutrient deficiencies, and community nutrition. He emphasised field-based research and large-scale nutritional surveys. Under his leadership, NIN established close connections between laboratory science and public health interventions. One of the major contributions of NIN during this period was the development of Recommended Dietary Allowances (RDAs) for Indians. These guidelines became fundamental for nutritional planning, food policy, and public health programmes. Gopalan also pioneered the National Nutrition Monitoring Bureau (NNMB), established in 1972. The NNMB conducted nationwide dietary and nutritional surveys, generating valuable data on nutritional status across India. Primarily NNMB was established in the states of Kerala, TamilNadu, Karnataka, Andhra Pradesh, Maharashtra, Gujarat, Madhya Pradesh, Orissa, West Bengal and Uttar Pradesh.²² It helps us to understand the nutrition status of tribal population in particular and the people of India in general.²³ Another important achievement was the publication of "Nutritive Value of Indian Foods," which analysed hundreds of Indian food items and provided scientific nutritional data. This work made India one of the first developing countries to establish its own nutritional standards and food composition tables.

Conclusion :

The history of NIN demonstrates how nutrition science became intertwined with modern nation-building in India. After independence, nutrition was no longer viewed merely as a medical concern. It became associated with productivity, education, military strength, economic development, and social welfare.

The history of the National Institute of Nutrition between 1918 and 1974 represents the evolution of modern nutrition science in India. Beginning as a small colonial laboratory founded by Sir Robert McCarrison, the institute gradually became one of the world's leading centres of nutritional research. During the colonial period, NIN focused primarily on deficiency diseases and public health concerns associated with poverty and food insecurity. After independence, it evolved into a national institution central to India's developmental planning and welfare programmes.

Under visionary leaders such as McCarrison, Aykroyd, Patwardhan, and Gopalan, the institute expanded nutrition research into diverse fields including food science, epidemiology, dietary surveys, maternal health, and chronic diseases. Its work shaped India's nutritional policies, public health programmes, and scientific standards. By the end of the twentieth century, NIN had established itself as a globally respected institution committed to combating malnutrition and promoting public health nutrition. Its history reflects not only the development of nutritional science but also the broader social, political, and economic transformations of modern India.

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