

## Agriculture- Nutrition Linkage for Human Healthcare: A Conceptual Legal Framework of Implications and Pathways

Dr. Bhupinder Singh<sup>1,\*</sup>

### Abstract

*Human nutrition describes the processes whereby cellular organelles, cells, tissues, organs, systems, and the body as an entire obtain and use necessary substances obtained from foods and nutrients to take care of structural and functional integrity. The multidisciplinary nature of the science of nutrition, lying in both the natural (biological) and social scientific fields, demands that students of nutrition have a basic understanding of the many branches of science and that they should be ready to integrate different concepts from these different disciplines. While clothing and shelter have emerged as basic needs within the due course of human evolution, right from the start of life, food has been the primary source of energy and existence. Nutrition and food is one of the necessities for the sustenance of life. It's no wonder to mention that community health is national wealth. Over the centuries of human existence on planet Earth, food, clothing, and shelter have emerged because of the three necessities. The dependence on food grew manifold with the rapid rise within the global population and today, it is one among the main concerns for several of the countries, especially the developing and underdeveloped countries, to satisfy the food demand of its population.*

**Keywords:** Agriculture, Nutrition, Food, Law, Health

**Author for correspondence\* email id.** [talwandibss@gmail.com](mailto:talwandibss@gmail.com)

### Introduction

Obtaining health care meant getting to a doctor's office for routine shots and tests or entering a hospital for an operation, delivery of a baby, or emergency treatment following a car accident. Advances in medicine, increase, creation of the Medicare and Medicaid programs, and economic trends have dramatically changed healthcare delivery. This article examines the major common types of health care organizations and health care providers in an industry that is large, complex, and heavily regulated.<sup>2</sup>

### Significance of Nutrition for Human Healthcare

Human nutrition describes the processes whereby cellular organelles, cells, tissues, organs, systems, and the body as an entire obtain and use necessary substances obtained from foods

---

<sup>1</sup> Associate Professor, School of Law, Christ Deemed-to-be University, Delhi-NCR Campus, Uttar Pradesh, India

<sup>2</sup> Janice Kazmier, Introduction to Health Care Law (Delmar, Maxwell Drive, USA, 2009) p2.

(nutrients) to take care of structural and functional integrity.<sup>3</sup> To understand how humans obtain and utilize foods and nutrients from a molecular to a societal level. Of the factors determining and influencing these processes, human nutrition study and practice involve a spectrum of other essential and applied scientific disciplines. These include biology, genetics, biochemistry, chemistry, physics, food science, microbiology, physiology, pathology, immunology, psychology, sociology, politics, anthropology, agriculture, pharmacology, communications, and economics. Therefore, nutrition departments are often found in Medical (Health) or Social Science, or Pharmacy, or Agriculture Faculties at tertiary training institutions. The multidisciplinary nature of the science of nutrition, lying in both the natural (biological) and social scientific fields, demands that students of nutrition have a basic understanding of the many branches of science and that they should be ready to integrate different concepts from these different disciplines. The health or disease state of the various organs and systems will determine the body's nutrient requirements as an entire. The central system/nervous system is additionally the location or "headquarters" of the upper, mental functions associated with conscious or cognitive, spiritual, religious, and cultural behaviors, which can determine, in response to the internal and external environments, what and how much are going to be eaten. What and how much is eaten will further depend upon what is available, influenced by several things determining food security. On a private, household, community, national, or international level, all of these factors shape the external environment.

### **Functional Aspects of Nutrition**

During the first renaissance of nutrition, emphasis was placed on the study of nutrients and their functions. A medical, science or biological model underpinned studying the relationships between nutrition and health or ill-health. During the second renaissance, these aspects aren't neglected but expanded to incorporate all other external environmental factors that determine what and how much food and nutrients are available on a worldwide level. These studies are underpinned by social, behavioral, economic, agricultural, and political sciences.

The study of human nutrition, therefore, seeks to understand the complexities of both social and biological factors on how individuals and populations maintain optimal function and health, how the quality, quantity, and balance of the food supply are influenced, what happens to food after it is eaten, and the way that diet affects health and well-being. This integrated approach has led to a far better understanding of the causes and consequences of malnutrition and the connection between nutrition and health.<sup>4</sup>

### **Different Dimensions of Agriculture, Human Needs and Life**

---

<sup>3</sup> Introduction to Human Nutrition: <https://catalogimages.wiley.com/images/db/pdf/9781405168076.excerpt.pdf>

<sup>4</sup> Michael J Gibney, Susan A Lanham-New, Aedin Cassidy, Hester H Vorster, Introduction to Human Nutrition, (A John Wiley & Sons, Ltd., Publication, 2009) page 2-3.

While clothing and shelter have emerged as basic needs within the due course of human evolution, right from the start of life, food has been the primary source of energy and existence. Food is one of the necessities for the sustenance of life. It's no wonder to mention that community health is national wealth. Over the centuries of human existence on planet Earth, food, clothing, and shelter have emerged because of the three necessities. The dependence on food grew manifold with the rapid rise within the global population and today, it is one among the main concerns for several of the countries, especially the developing and underdeveloped countries, to satisfy the food demand of its population.<sup>5</sup> The Foods, living habits, and environment create an imbalance that manifested on the physical level and later affected the mind. Thus, there is an immediate connection between diet, habits, environment and affective disorder.<sup>6</sup>

A nutritious diet provides health promotion and disease prevention, making it a crucial part of public health policy. Good nutrition and optimal nutrition is achieved when an individual eats a varied diet containing all nutrients in sufficient amounts as determined by dietary reference values. Essentially, this permits an individual to develop, grow, or take care of the body and its stores for later use, leaving natural variation for health and disease prevention. Under-nutrition occurs when an individual consume fewer nutrients than the body requires, leading to a nutritional deficit. it is commonest in poverty and people with increased nutritional requirements. In contrast, over-nutritional occurs when an individual consumes an excessive amount of nutrients. Significant levels of illness and mortality are linked to dietary habits like a coffee intake of fresh foods and vegetables, fiber, and excessive energy consumption.<sup>7</sup>

### **Vitality of Nutritional Needs**

Nutritional screening and assessment of risk involve examining things like height, weight, laboratory values on biochemistry, diet, appetite, illness or diagnosis to work out the danger of nutritional problems in specific populations. Screening may target pregnant women, for instance, on B-complex vitamin and folate levels, the elderly on malnutrition, or those with a nutritional disorder like cardiac disorder to detect deficiencies or potential imbalance. Health intelligence shows that folks from lower socio-economic groups suffer from higher rates of coronary health disease, which rates of vital signs and stroke are higher; this is often also the case of certain cancers and cavity prevalence in children.<sup>8</sup>

Since everyone must eat to measure, food is one of the earliest sorts of medicine. Herbal remedies and natural food remedies handed over the generations were used universally before recent medicine. The traditional Greeks, Romans, Chinese, Indians, and Middle Easterners all used food to heal the body, as did virtually all traditional cultures. When modern science was ready to isolate the active ingredients of such remedies and became the quality treatments, the utilization of food in healing became a ridicule source. It was considered an "old wives' tale"

---

<sup>5</sup> Available at [http://www.allindiareporter.in/articles/index.php?article=1545&phrase\\_id=145140](http://www.allindiareporter.in/articles/index.php?article=1545&phrase_id=145140)

<sup>6</sup> Dr. Sanjay Bhattacharya, *Social Work: Psycho-Social and Health Aspects* 263-264 (2008).

<sup>7</sup> World Health Organization (WHO), 2003.

<sup>8</sup> Frances Wilson and MzwandileMabhala, *Key Concepts in Public Health* 208-210(2009).

in Western culture. While doctors have always known the importance of giving the body its proper nutrients to take care of health, actual healing using food went out of favor within the West with the arrival of allopathic medicine. In other cultures the utilization of herbal remedies and healing systems that incorporate food- like Ayurveda in India, Chinese Medicine, and humoral medicine in South and Latin America and Africa- still thrive. Food is equated to "fuel" in American culture, and for several people, the difference between "regular" and "super high octane" has got to do with taste instead of nutritional content. The introduction of chemicals to crop fertilizers and food preservatives has added to what many feels may be a downward spiral within nutrition quality. Rather than promoting health, some feel that modern nutrition, with its high fat and high sodium content and toxic additives, actually contributes to chronic disease. Poor nutrition reduces the effectiveness of the body to keep off disease. When disease occurs, the result could also be the interruption of the digestive process, either by poor absorption or reduced appetite. Modern proponents of healing through diet feel that despite our apparent longevity compared with earlier times, our lives aren't qualitatively better, which the loss of the integrity of whole food may be a substantial contribution factor. Nutritionist Annemarie Colbin believes that learning difficulties and behavior problems of youngsters could also be rooted in degenerating nutrition: Childhood problems that were rare a generation ago are now so prevalent that they are called "the new morbidity" learning difficulty, behavioral disturbances, speech and hearing difficulty, faulty vision, severe dental misalignment, etc. it is my profound conviction that an excellent many of our more serious health problems today stem not only from bad food or pollution but also from the chemical treatment of minor physiological adjustment.<sup>9</sup> Nutrients originally thought of as needed solely to stop such diseases as beriberi, scurvy, and rickets are now appreciated as necessary due to their relationship to buoyant health, vitality, and longevity. Once they are well fed, today's children are taller and sturdier and reach maturity at an earlier age than children of the previous generation.<sup>10</sup>

### **(1) Scientific Approach towards Human Healthcare and Nutrition Values**

Good nutrition depends on the selection of a diet and knowledge of nutritive value of foods. It does not necessarily depend upon economic factors, although a better economic status may permit a better nutritional level. growth needs could significantly increase the intense effects of nutritional deficiencies. The individual's nutritional status markedly influences the quantity and therefore the rate at which nutrients are employed by the body. Tissue nutrition depends on the relation between the availability of nutrients to the tissue and, therefore the tissue requirement.<sup>11</sup>

Many of us assume that the majority of the malnutrition within the world may be a consequence of poverty, which economic development that increases people's income will improve their nutritional status. Certainly for those affected by absolute deficiency of calories and protein, the economic ability to "demand" food can mean the difference between life and

---

<sup>9</sup> David Levinson and Laura Gaccione, *Health and Illness: A Cross-Cultural Encyclopedia* 90-91 (1997).

<sup>10</sup> Chaney and Rose, *Nutrition* 1 (1971).

<sup>11</sup> Paul H. Mussen, *Handbook of Research Methods in Child Development* 272 (1970).

death. However, for malnutrition, the evidence is that increased prosperity can have an adverse effect, a minimum of initially. Food preference plays an essential role in nutrition. Adverse effects of development are deeply intertwined with societal changes. Women, drawn into economic activities outside the house, have fewer children. Usually they also stop nursing and begin bottle feeding. Other women do so just because bottle feeding becomes seniority. For monetary reasons dry milk is usually over-diluted with unsafe water in bottles that can't be boiled due to fuel wood storage. the results of those practices are often epidemics of enteritis and high infant deathrate.<sup>12</sup>

### **Malnutrition and its impact**

Malnutrition is fundamentally a poverty problem. It is not a minimum of presently, a result of inadequate global supplies of food, for the planet produces enough food to satisfy everybody's nutrient requirements. Rather, it's the unequal access of nations and other people thereto food that causes most malnutrition. Malnutrition strikes particularly hard those least ready to protect themselves, namely, infants and young children. Poor nutrition may be a significant contribution to the high infant and one to 3 year old mortality rates in developing countries. Furthermore, the weakened state caused by malnutrition exacerbates the consequences of normal childhood disease. Malnutrition also can have adverse consequences for adults. Caloric shortage and anemia ca limit work capacity. Specific micronutrient deficiencies also can cause disease in adults also as in children, for instance , vitamin A, xerophthalmia; B-complex vitamin , beriberi; vitamin B2, ariboflavinosis; niacin, pellagra; vitamin C, scurvy; vitamin D , rickets; iodine, goiter. Pregnant and lactating women are frequently malnourished because the traditional diet does not meet their heightened nutrient requirements. Their malnutrition might not only debilitate them but also cause low birth-weights and poorer nutritional status for his or her offspring. no matter which form malnutrition takes and which group is strikes, one consequence is common: intense human suffering. Malnutrition inflicts severe deprivation and constitutes the denial of a basic need and right. Malnutrition also erodes a country's most elementary resource, its human capital, thus becoming a significant barrier to economic development.<sup>13</sup>

### **Concluding Remarks**

Malnutrition in children isn't suffering from food intake alone; it's also influenced by access to health services, quality of look after the kid and pregnant mother also nearly as good hygiene practices. Girls are more in danger of malnutrition than boys due to their lower social station. Vitamin and mineral deficiencies also affect children's survival and development. Iodine deficiency, which reduces learning capacity by up to 13 per cent, is widespread because fewer than half all households use iodised salt. Malnutrition in infancy has serious, long-term consequences because it impedes motor, sensory, cognitive, social and emotional development. Malnourished children are less likely to perform well in class and more likely to grow into malnourished adults, at greater risk of disease and early

<sup>12</sup> Melinda S. Meade and Robert J. Earickson, *Medical Geography* 134-135(2006).

<sup>13</sup> A. S. Kohli and S. R. Sharma, *Encyclopaedia of Social Welfare and Administration* 145-146(1996).

death. Around one-third of all adult women are underweight. Inadequate care of girls and girls, especially during pregnancy, leads to low- birth weight babies.<sup>14</sup> It jolted the national conscience when the Prime Minister expressed concern over the severe malnutrition among children within the country, citing a report that said 42 per cent were underweight. As various agencies and experts set about finding causes and solutions, fresh reports of existing data are emerging, which suggest that the general affluence of a specific state might not have an immediate about the health of its children. The improving economy plus rate of growth seem to have little or no impact, which indicates a clear distribution problem. This is often not only about distribution of wealth, but also, specifically, food. Rising economies often have high inflation, which results in particular pressures on food prices, which rise even more steeply. This takes food out of the poor man's hand albeit he does earn some money. within the short term, thus, it's not economic corrections, but direct intervention which will save the youngsters suffering hunger.<sup>15</sup> Investment in programmes designed to enhance the nutrition status of youngsters should therefore be considered not even as a humanitarian and welfare operation but as a serious approach towards insuring durable social and economic development of the country.<sup>16</sup>

**CITE THIS ARTICLE**

Dr. Bhupinder Singh, Agriculture-Nutrition Linkage for Human Healthcare: A Conceptual Legal Framework of Implications and Pathways, Justice and Law Bulletin, pp. 44-49, (2022)

---

<sup>14</sup>Available at [http://www.unicef.org/india/children\\_2356.htm](http://www.unicef.org/india/children_2356.htm) (accessed on Jan. 19, 2016).

<sup>15</sup>*The Tribune*, Thursday, Jan. 19, 2012: "The Child Stays Hungry".

<sup>16</sup>R. Kumar (ed.), *Child Development in India: Health, Welfare and Management* Vol.1 21 (1988).