

## **REVIEW**

### **The Rise of Nutrition and Dietetics in Asia**

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**ABSTRACT** This article overviews the history and development of nutrition and dietetics starting from the ancient civilizations in Asia. The progress of the nutrition research on nutrition deficiencies leading to the discovery of vitamins, and the extension of nutrition services evolving from healthcare facilities to communities are described. The emerging advancement in dietetic education and professionalism, and the establishment of the Asian Federation of Dietetic Associations (AFDA) aiming for improved nutrition status are summarized.

**Keywords:** Asian dietetic history, AFDA

#### ***The early beginnings of nutrition and dietetics in Asia***

Ancient civilizations, among them, the Asian cultures of China and India, noticed and studied the importance and impact of food and diet on health and disease of their people.

Three thousand years ago, during the Zhou Dynasty in China, a diet doctor was a medical specialist as delineated in the royal protocol of the ancient book Zhouli. Preserved in a seventh-century text, entitled "Essential Prescription worth a Thousand Gold" is the following passage on diet therapy: "food is fundamental to health; unawareness of proper food intake is inadequate for survival; physicians find the disease origin and treat patients with food modification, then prescribe medicine; taking prudent diet, over-eating causes diseases" (1).

The traditional medical care system in India, Ayurvedic medicine, has also been practiced thousands of years. Ayurvedic physicians today continue to prescribe diets, in addition to herbal compounds, exercise regimens and lifestyle recommendations to improve the health of their patients (2).

#### ***The development of a nutrition research approach***

During its early development, nutrition and dietetics were mainly based on empirical information. The research approach to these sciences evolved slowly over the years. The following are examples of how early research into nutrition and dietetics helped to improve the lives of people suffering from nutrient deficiency maladies which afflicted people worldwide. With the Age of Exploration to the new world during the fifteenth through the eighteenth centuries, nutrition

deficiencies and the discovery of nutrients became the subjects of research and experimentation. The high morbidity and mortality among people during extended ocean crossings captured the interest of researchers. In 1747, the Scottish physician in British Navy, Dr. James Lind, performed the first clinical trials of test diets on the crew to study the nutritional requirements of seafarers who lacked the availability of fresh fruits and vegetables for extended periods of time (3). His discovery of the need for citrus fruit to prevent scurvy was a landmark achievement in the annals of maritime history.

Later, in 1884, Dr. Kanehiro Kakaki, a Japanese naval physician, using epidemiological research, hypothesized that beriberi was due to insufficient nutrition (4). His research results helped to drastically reduce the incidence of this deficiency by improved diet. Another example of early research in 1897 is provided by Dr. Christiaan Eijkman who a Dutch physician conducted investigation in Batavia, Indonesia, noticed that unpolished rice containing some substance fed to chickens helped to prevent beriberi. His work led to the discovery of vitamins (5).

#### ***The evolution of dietetics in the early twentieth century***

As the twentieth century approached, nutrition concerns, formerly focusing mainly on military personnel, began to include children. The earliest school lunch program was a Buddhist activity in Yamagata Prefecture in northern Japan in 1889. This program eventually grew into a nationwide undertaking (6, 7).

In Japan, in 1914, Dr. Saiki Tadasu established the first nutrition institute. He is also credited with opening the first school to train dietitians in 1924 (8). In Korea, in 1929, Nutrition Science and Food Management was offered as a major of study in the Department of Home Economics at Ewha

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Women's Professional School (9, 10). Ten years later in 1939, at the University of the Philippines, the discipline of Foods and Nutrition was introduced as a bachelor degree major (11).

Today, dietitians play an essential role in service in health care facilities. This service can trace its origin to Turkey during the Crimean War, 1854-1856. In this war, Florence Nightingale, originally from Britain, found that poor diet, along with inadequate sanitation and lack of nursing care were detrimental to the wounded and the sick, she was the first to set up a diet kitchen in the military hospital (12, 13).

As the importance of dietetics grew, hospitals in Asia began to hire dietitians in early twentieth century. In 1921, Beijing Union Hospital being funded by Rockefeller Foundation opened in China and had an independent nutrition department, whose chief dietitians were from the United States (14).

Nutrition service now widely extends to the community. Dr. Cicely Williams, a Jamaican pediatrician who worked in Malaysia, began an outreach program in the 1930's and 1940's to campaign against the use of artificial milk substitutes for infant feeding. Her famous speech on "Milk and Murder" was a landmark event at the Singapore Rotary Club in 1939 (15). Her outspoken promotion of breastfeeding made an everlasting and global impact on nutrition related to infants and young children. Today, there are two non-government organizations formed in Penang working around the world to support and promote breastfeeding – the International Baby Food Action Network (IBFAN) and the World Alliance for Breastfeeding Action (WABA) (16).

### *The emerging progress of dietetics*

The field of dietetics has been booming in Asia since the second half of the twentieth century. This is evidenced by the increasing demand for dietitians in the workforce along with the increased number of graduates in nutrition and dietetics from Asian universities. The issues of curriculum, practicum and qualification requirement have been addressed and imposed by educational institutions and regulatory bodies to safeguard the competency standards of dietitians.

One of the most significant events in the history of Asian dietetics was in early 1990s with the establishment of the Asian Federation of Dietetic Associations (AFDA). The first time that Asian dietetic leaders met was at the Asian Symposium on Rice and Nutrition by the invitation of the Taipei Dietitian Association in 1990. This symposium brought about the birth of the Asian Forum of Dietetic Professionals (AFDP) in 1991, in Kuala Lumpur. AFDP was later renamed as AFDA (17).

The AFDA has a three-fold mission: (1) to promote networking, (2) to organize and host the Asian Congress of Dietetics, and (3) to pursue the advancement of applied nutrition and dietetic practice to achieve better nutrition status for the Asian populations (17).

Since the first Asian Congress of Dietetics (ACD) in Jakarta in 1994, and the subsequent meetings held every four years, this Congress has

become the major venue for the sharing of knowledge as well as research and practice among dietitians and nutritionists. Beginning with this new year 2019, AFDA will start to publish the web-based and peer-reviewed Asian Journal of Dietetics (AJD).

The AFDA now consists of 11 full members from Hong Kong Nutrition Association, Indian Dietetic Association, Indonesia Dietitians Association, Japan Dietetic Association, Korean Dietetic Association, Malaysian Dietitians' Association, Pakistan Nutrition and Dietetics Society, Nutritionist-Dietitians' Association of the Philippines, Singapore Nutrition and Dietetics Association, Thai Dietetic Association, Chinese Dietetic Society (Taiwan), and one affiliated member from Dietitians Association of Australia (17). AFDA dietitians serve more than 20 billion people, their responsibility is huge and tremendously important.

Looking to the future, AFDA will consolidate more inspiring ideas, search for excellence in the dietetic profession, and continue striving to achieve improved nutrition and health of the people in Asia.

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