

Special Contribution

Historical background and development of applied nutrition and community nutrition in Korea*

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Abstract

This paper overviews the historical background and development of applied nutrition and community nutrition in Korea. The nutrition studies in the early years focused on animal experiments, human metabolism, and food analysis and therefore were limited to classrooms and research laboratories in universities without spreading into the lives of people. Korean specialists trained through the UN International Course of Applied Nutrition initiated the Applied Nutrition Program (ANP) in Korea in the 1960s. The ANP in Korea was effectively implemented until 1986 with support from UNICEF, FAO, and WHO as a national project to improve the nutrition and health of rural residents. With economic development and urbanization in Korea, the rural-focusing ANP was re-born to a more extended version with the name of "Community Nutrition", targeting the nutrition and health of the entire Korean population. Scholarly associations including the Korean Society of Community Nutrition established in 1995 have significantly contributed to the development of Community Nutrition in Korea and are expected to continue to work for a better connection between nutrition and health promotion.

Key Words: Applied nutrition, community nutrition, history, Korea

Nutrition Studies in Korea in the Past

In Korea, during 1940s, nutrition was mainly taught in the Home Economics departments of women's colleges. The only three women's colleges in Korea at that time were Ewha Women's College, Sook Myoung Women's College, and the National Women's Teachers College. After the colleges became 4-year universities, nutrition continued to be taught in the College of Home Economics. With this start, nutrition in Korea has become a field of women, and symposiums or seminars by the Korean Nutrition Society, the Korean Society of Community Nutrition, or the Korean Dietetic Association are attended primarily by women even at the present time.

After Korea regained its independence in 1945, while General Nutrition continued to be taught in the Home Economics, Biochemical Nutrition was taught in College of Pharmacy and College of Agriculture, and Biochemistry was taught in College of Medicine. Contents of the nutrition courses were mostly devoted to nutrients and their metabolisms, therefore, the scope of nutrition was relatively limited to classrooms and research laboratories in universities without spreading into the lives of people. Nutrition courses did not include areas needed to promote healthy dietary habits, such as nutrition education, to facilitate extension of knowledge, changes of attitude, and changes of

behavior. The *Korean Journal of Nutrition*, the major scholarly journal in nutrition in Korea during the early years, also focused on publishing research papers of animal experiments, human metabolism, and food analysis, resulting in only a few applied nutrition research papers having been published.

New Approach of Applied Nutrition by United Nations

In 1963, FAO, WHO, and UNICEF jointly opened a new and pioneering program under the innovative name of International Course of Applied Nutrition in the London School of Hygiene and Tropical Medicine to train specialists who would lead Applied Nutrition Programs (ANP) promoting nutrition and health among people in underdeveloped and developing countries. The United Nations established the new program in the London School because the UK had global knowledge in nutrition and health accumulated from its colonial era, expanding to Africa, Middle East, India, Asia, and Latin America.

The United Nations Development Plan in each nation selected specialists who had potential influence and ability to lead the ANP through the open nomination process. The chosen specialists were sent to the London School of Hygiene and

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Tropical Medicine. Each nation was allowed to send one specialist per year for five years. The selected specialists' expertise was diverse from nutrition, agriculture, food technology, medicine, to education. The author was sent as a chosen specialist in the first selection year, followed by Dr. Bun Suk Tchai of the Medical School of Seoul National University, Ms. Jun Gyo Park of the Office of Rural Development, and Dr. Cheol Son of Chonnam National University Medical School.

The education and training from the International Course of Applied Nutrition in the London School was solidified with more hands on training in Nigeria, Africa. The training in the National University of Nigeria included topics such as nutrition assessment and nutrition education, followed by the Maternal and Child Health training in pediatric hospitals and local health centers.

The three chosen specialists mentioned above were actively involved in the development of ANP of Korea. Therefore, the innovative UN program left a significant impact in development of Applied Nutrition in Korea.

Development of the National Applied Nutrition Program in Korea

Establishment of Courses in Applied Nutrition and Community Nutrition at Seoul National University

1) The College of Agriculture of Seoul National University created the Department of Agricultural Home Economics in 1958 to develop human capital for national rural extension programs. The author offered a new course titled as "Applied Nutrition" in the College of Agriculture in 1965 right completing the International Course of Applied Nutrition. The graduates who learned applied nutrition from the course in the College of Agriculture became the workforce in the National Applied Nutrition Program led by the Office of Rural Development.

2) The Department of Food and Nutrition in the College of Home Economics of the Seoul National University opened a new course titled "Applied Nutrition" in 1971, and after several years renamed the course "Community Nutrition".

3) Seoul National University established the SNU Attached Open University of Air and Correspondence in 1971. Many rural development workers and ANP leaders entered the Department of Home Economics, which also naturally allowed the education to function also as in-service training for the Korean ANP. The Department of Home Economics opened a course named "Community Nutrition" and published a college textbook of Community Nutrition through the SNU publishing unit. This was the first ever published college textbook in Community Nutrition in Korea.

As described above, Seoul National University led the

development of Applied Nutrition and Community Nutrition in Korea by creating and continuing education and training in Applied Nutrition and Community Nutrition.

Factors having initiated Korean Applied Nutrition Program

During the 1940s, Korea suffered from hunger and malnutrition because of poverty and food shortage. The Korean War further aggravated the situation to an even more severe food shortage, resulting in extreme malnutrition, tuberculosis, and anemia.

The ANP by WHO/UNICEF emphasized establishing local health centers, combating tuberculosis, and promoting maternal and child nutrition. However, the ANP in Korea, led by the Office of Rural Development, was established with an emphasis in rural development with more than 60% of the total population residing in rural areas. More specific factors were:

- a) Improvement in food production was needed with agricultural production output being mainly grains during the 1960s.
- b) Dietary improvement was also called for because diets relied heavily on grains, which was a natural result from the agricultural production system with excessive concentration on grains.
- c) Chronic malnutrition was more prevalent in rural areas than urban areas.

Korean Applied Nutrition Program

1) Responsible entity

The Korean Applied Nutrition Program was conducted under supervision of the Office of Rural Development.

2) Human agents

An expert committee was created to carry out the ANP in the central and the local levels. The central expert committee consisted of specialists from the Office of Rural Development, UN agencies (FAO/WHO/UNICEF), Economical Planning Board, and Ministry of Health and Social Welfare. The ANP was executed by 320 extension field workers and 120 ANP field workers.

3) Support from and Agreement with the UN Agencies (1968-1986)

FAO and WHO sent technical advisors for the ANP upon requests of the Korean government. UNICEF established the Research and Training Institute of Applied Nutrition for the Rural Areas and supported with materials, equipments, and research and training. Mr. Alan E. McBain, the first representative of UNICEF Korea and his program colleague, Dr. Michael M. Park devoted to promoting the ANP in Korea.

4) Main programs of the ANP

• ANP Model Villages

The model villages programs had a cycle of site selection, initial assessment, objective establishment, project execution, and

evaluation. A total of 1,847 model villages were developed. The main project was education to produce foods rich in nutrients identified as deficient from the initial nutrition assessment. Model villages set up a house for nutrition improvement and a house for food processing and utilized them for day care feeding and nutrition education. Various types of teaching materials for the ANP education were developed and distributed to field workers, which laid a solid foundation for the national ANP.

- Child Nutrition Care Villages

A total of 16 villages, one or two villages per “*Do* (province)” were chosen as Child Nutrition Care Villages for better child growth and development in the rural areas. Child nutrition education, meal service education for residents, and nutrition education for pregnant women were conducted. Additional supports to increase the incomes of rural households were provided for these villages, and some of the raised incomes were used to provide meal services to children.

The ANP Model Villages and the Child Nutrition Care Villages became sound frameworks for the present model villages to improve living conditions and have contributed to promoting the health and quality of life of rural residents.

- Kitchen and Quantity Food Service Center

The village kitchens and quantity food service centers were established and run to teach cooking techniques to women in rural areas and to provide meal services to promote balanced diets.

- Mobile Education Vehicle for Better Diet

In order to reach remote villages, 12 vehicles donated by the FAO/WHO were circulated to teach basic nutrition, cooking methods, food preservation by jar, utilizing various audiovisual aids such as movies, slides, etc.

- Workshops and Training

Annual 3-day workshops were offered at each level for the field workers. From 1982, ANP specialists were annually sent to other countries such as Japan, Taiwan, and the Philippines to observe the countries’ ANPs on the support from UNICEF. From 1984, the Korean government support displaced the UNICEF support.

5) Outcome of ANP

- Improved Nutritional Status of Rural Residents

Diets and nutritional status of rural residents were significantly improved after the Korean ANP.

- Improved Dietary Attitude and Behaviors

The evaluation research showed that dietary attitudes and behaviors were considerably improved after the Korean ANP.

- Research and Training Institute of Applied Nutrition for the Rural Areas

The Research and Training Institute of Applied Nutrition for the Rural Area was established by the Office of Rural Development in support from the UNICEF to research, guide, and promote the ANP.

- Korean ANP Evaluation and Promotion

The Korean ANP was evaluated as one of the most successful

ANPs by Dr. Derek S. Miller, UNICEF evaluator and professor of Queen Elizabeth College of London, Dr. Buogess of WHO, Dr. Rahmat U. Qureshi of FAO, and Dr. Welle of UNICEF. They also recommended the Korean ANP to be modeled in other countries.

6) Current ANP

The ANP in Korea was first established and continued with supports from such UN agencies as UNICEF/FAO/WHO for a long period of time (1960-1986) as a national project to improve the nutrition and health of rural residents. After the supports from the UN agencies was phased out, the ANP has continued to develop as a national program with support from the Korean government. Contributions for developing ANP by Dr. Sung Kyu Chun, Mrs. Pyong Ja Lim, Dr. Kum Ju Chung, and Mrs. Jun Gyo Park of the Office of Rural Development were overwhelmingly amazing.

Development of Community Nutrition in Korea

When Korea was an impoverished agricultural country, the UN agency-supported ANP was established and effectively conducted. With economic development, urbanization, and industrialization happening in Korea, the rural-focusing ANP was re-born to a more extended version with the name of “Community

Table 1. Major Subjects of Research, Education, and Practice in Community Nutrition

1) Population and dietary problems	- Population growth and diet quality - Population change and dietary change
2) Effects of Industrialization	- Mass production of food and food processing industry - Commercialism of food industry and individual's independence to choose - Increased need for mass meal service
3) Changes in personal relations and dietary problems	- Individualization of dietary behaviors - Nuclear families and changes in dietary behaviors - Simplified ceremonial occasions and changes in banquets for the occasions
4) Dietary behavior changes by social class	- Standard of living differences and food consumption differences - Meals from the point of view of social welfare - Dietary changes in low income urban areas and remote rural areas - Unbalanced diets in rural areas
5) Industry changes and dietary problems	- Double-income families and diets - Diets of laborers - Increased number of single-person households and diets - Low-income laborers and diets - Meals during the busy farming season
6) Technology development, lifestyle changes, and dietary problems	- Automation and nutrition imbalance - Longer active hours and extended life areas and their impact on diets - Food production and process technology development and their impact on diets
7) Changes in dietary attitude and value system	- Changes in the role of eating - Changes in nutritional attitudes toward food - Changes in food value system

Nutrition,” targeting the entire Korean population as a field of research and projects.

One of the distinctive characteristics of Community Nutrition would be recognizing that the nutrition and health of individuals are not entirely determined by individuals. That is, nutrition and health has become a problem of a *society* or *community* from the problems of *individuals*. Therefore, the objectives of Community Nutrition are not only to promote individual health, but also to confront and solve health problems at the community levels ranging from a local community to a nation, and to the world. Community Nutrition should tackle the following problems for health promotion for all (Table 1).

Many professionals with expertise in Community Nutrition and its related areas are actively working in various areas in Korea. Further development of Community Nutrition will come from productive collaboration among the many professionals from universities, research centers, hospitals, public health centers, social welfare institutes and government agencies.

Roles of Scholarly Associations in the Development of Community Nutrition

After Korea regained her independence in 1945, the Nutrition Society, more of a social network of researchers than a formal scholarly association, was formed by nutrition researchers including Dr. Ho Jik Kim in the Department of Home Economics of Ewha Women's University, Dr. Ki Young Lee in the Department of Biochemistry of the College of Medicine, and Dr. Ho Shik Kim in the Department of Agricultural Chemistry of the College of Agriculture, Seoul National University. This society functioned as a window to international nutrition societies until 1966. With the establishment of the Korean Nutrition Society in 1967, many associations such as the Korean Society of Food Science and the Korean Society of Food Culture were created. At the same time, many professionals specializing in food and nutrition were educated and trained. In 1995, the Korean Society of Community Nutrition (KSCN) opened its door for answering the demands to better translate scientific knowledge into practice and to a better connection between nutrition and health promotion, helped by enhanced capabilities of community nutritionists. Coincidentally, the Health Promotion Law was passed during the time of KSCN's establishment, and it highlighted the national needs and roles of community nutrition.

The KSCN works in six areas:

- Holding conferences, symposiums, exhibitions, etc.
- Publishing scholarly journal, education materials, books, etc.
- Development and distribution of nutrition education material
- Providing health-related information
- Collaborating and/or advising with national and local public projects and policies
- Networking among members

The KSCN annually offers national and/or international

Table 2. Symposiums Held by the Korean Society of Community Nutrition

May, 1996	Opening Symposium for The Korean Society Of Community Nutrition - Polarized Nutritional Problems in Community
November, 1996	Fall Symposium-Theory and Practice of Nutrition Education
May, 1997	Spring Symposium-Nutrition Counseling for Health Promotion
November, 1997	International Symposium-Paradigm of Nutrition Service for Health Promotion
May, 1998	Spring Symposium - Reasonable Meal Management in the Era of Economic Crisis
November, 1998	Fall Symposium-Nutrition Screening in Health Examination: Why and How Practiced
May, 1999	Spring Symposium - Dietary Guidelines and Institutional Foodservice for the Elderly
November, 1999	Fall Symposium - New Millennium and Early Childhood
February, 2000	International Symposium - New Dimensions of Nutritional Management for Elderly
May, 2000	Spring Symposium - Strategy of Diet Quality Assessment and Nutrition Education for the Public
November, 2000	Fall Symposium - Development of Nutrition Surveillance System for the United Nation
May, 2001	Spring Symposium - Healthy Weight and Nutrition of Koreans
November, 2001	1st Special Symposium to Promote Rice Consumption - Rice, Importance for Koreans' Health
November, 2001	Fall Symposium - How to Overcome the Nutrition Problems of Children
February, 2002	International Symposium - Nutritional Management for the Elderly
May, 2002	Spring Symposium - Strategy Development of Optimal Salt Intake for Koreans
September, 2002	2nd Special Symposium to Promote Rice Consumption - Planning and Practice of Meal with Rice
November, 2002	Fall Symposium-Maternal Nutrition and Healthy New Generation
March, 2003	Special Symposium - Nutrition Management for Disease Prevention of the Elderly
May, 2003	Spring Symposium and Obesity Diet Expo-Food Service Management for Healthy Life
November, 2003	Fall Symposium-Nutritional Management and Health Care for Korean Middle Aged Women
May, 2004	International Symposium-Nutritional Management for the Elderly
May, 2004	Spring Symposium-Preventive Nutrition: Striving to Conquer Cancer
December, 2004	Fall Symposium-Nutritional Management and Health Care for Korean Middle Aged Women
April, 2005	Spring Symposium-Gene Counseling and Tailored Nutritional Care
October, 2005	10th Anniversary International Symposium - Nutritional Wellbeing Through Community Nutrition Approach
May, 2006	Spring Symposium-New paradigm of nutritional management for the healthy elderly
November, 2006	Fall Symposium-Ensuring healthy and safe food environment for children

conferences and co-hosts symposiums with other associations to encourage and advance community nutrition research and projects to reduce health disparity and to promote better nutrition and health. The KSCN's efforts are summarized in Table 2.

Publication of this new Journal, "*Nutrition Research and Practice*", is one step forward to bring a better connection

between so-called "*Bench*" Nutritional Science and Community Nutrition. Readers of this journal would be able to acquire knowledge of both areas and bring forward their ideas in the total spectrum of nutrition. I congratulate the publication of *Nutrition Research and Practice* and look forward to seeing this journal become the beginning of another new and great era of nutrition.