

## Review Article

# Advancing institutional dietetics and school nutrition programs in Korea

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More than 21,000 practicing dietitians are working in the various fields of institutional foodservice settings in Korea. For the effective placement and practice of dietitians in their special areas, proper enactment and implementation of required legislations shall be imperative. Following legislations are few of those: regulations for dietitians enacted in 1963 in accordance with decree of the Ministry of Health and Social Affairs; the School Meals Act in 1981; placement regulation for dietitians in childcare and nursery facilities with over 100 children under the enforcement of Infant Care Act of 1991; regulation for nutrition improvement program stated in the National Health Promotion Act of 1995; enforcement regulation for the placement of dietitians in public health centers under the Regional Public Health Act of 1997; amendment of School Meal Act and Primary and Secondary Education Act in 2003 stating that school shall have the nutrition education teacher who is dietitian qualified and passed national teacher qualifying examination; amendment of the Ministry of Health and Welfare Notification in 2003 enabled clinical dietitians at hospitals to bill a medical nutrition therapy service fee officially to patients with the following diseases: diabetes, hypertension, cardiac disease, and cancer; and amendment of the Justice Department and its Affiliates Notification in 2006 stating dietitians are placed at correction facilities. Newly introduced nutrition teachers who have tasks of nutrition education and meal service management were arranged at 4,134 schools of public or national primary and secondary as well as special schools for the handicapped in September, 2007.

**Key Words:** legislation-based nutrition program, institutional dietetics, nutrition teacher, school nutrition, work areas

## INTRODUCTION

Since the Korean Dietetic Association was established in 1969, it has grown to a policy making body of 15,000 members in Korea. More than 21,000 practicing dietitians are working in the various fields of institutions including business and industry, schools, hospitals as well as other non-institutional settings in Korea. For the effective placement and practice of dietitians in the areas of their specialties, proper enactment and implementation of required legislations shall be imperative. We will review the legislations related dietetics, current status and prospective of the fields of dietitian work area.

## OVERVIEW OF DIETITIAN IN KOREA

### *Job duty and work Area of dietitians*

A dietitian is defined as a person with a legally recognized qualification in nutrition and dietetics who applies the science of nutrition to the feeding and education of groups of people and individuals in health and disease.<sup>1</sup> Regulations for dietitians enacted in 1963 in accordance with decree of the Ministry of Health and Social Affairs in Korea. They conduct food service related activities including menu planning, purchasing, production and distribution, and clinical related activities (e.g. nutrition assessment, nutrition education and nutrition counseling) in an institutional food service such as business and industry, hospital,

school, childcare and nursery facilities, and social welfare facilities.

They also undertakes activities of providing food and nutritional information, dietary life improvement research and guidance, nutrition improvement projects in community, health promoting activities in non-foodservice settings such as nutraceutical foods selling, education and research institution, public health center, and administrative agency.

### *Certified Dietetic Specialists*

Although general dietitian license system has been introduced since 1962 under the authority of the Food Sanitation Act, its quality and job experience career are not enough to meet various demands for the specific work fields. That is why the KDA introduced the 'certified dietetic specialists system'. The KDA administers it based on the focus of dietetic education to encourage work efficiency and to improve the status of dietitians, producing 'certified clinical

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dietitian', 'certified administrative dietitian', and 'certified occupational health nutritionist'. Certified clinical dietitian refers to the dietitian who provides the nutrition treatment to cure and prevent diseases in mainly health service settings. Nutrition treatment includes nutrition evaluation, examination on nutrition status, consulting and education on nutrition and nutrition support. Certified administrative dietitian is the dietitian with an education focused on food service management activities including nutrition, menu, sanitation, production, financial, personnel, service and marketing with responsibility for feeding groups of peoples in foodservice settings. Certified Occupational Health Nutritionist refers to the dietitian who provides professional nutrition service including nutrition service by diseases, nutrition education and counseling to prevent the disease and to improve the health of workers.

### Education for dietitian

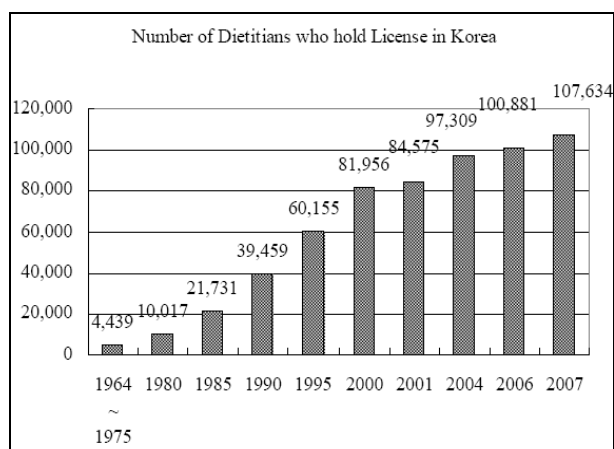
**Requirements for dietitian license.** Educational requirements for dietitian license is that completed a minimum of a bachelor's degree at a accredited university or college and curriculums and credits and passed a national examination according to the decree of the Ministry of Health and Welfare.

**Current status of accredited dietitian training schools.** There are 152 dietitian training schools fostering prospect dietitians which are consisted of 56 two-year colleges, 12 three-year colleges and 84 four-year universities.<sup>2</sup>

### Producing status of dietitians

As shown in Figure 1, the number of dietitians who hold license in Korea reached 107,634 in 2007, showing that the number of dietitians is about 10 times the number in 1980.

The number of certified dietetic specialists is a total of 2,440, consisting of 2,223 for certified clinical dietitians, 204 certified administrative dietitians and 13 certified occupational health nutritionists.



**Figure 1.** Trends in number of dietitians who hold license in Korea

### Employment status of dietitians

The employment of dietitians is expected to grow. The rate of employment among dietitian's license holders is 18.9. The rate of practicing dietitians is 43.8 per 100,000 population<sup>3</sup> which is high proportion compared to the

data reported by ICDA survey in 2004.<sup>1</sup> Presented at Figure 2, the majority of employed dietitians (88.1%) work at institutional foodservice sector and the remaining of 11.9% work at non-institutional foodservice. The number of dietitians working in institutional foodservice area is 18,599. Among of them, the most common working place is schools (40.6%), followed by business and industry (28.1%), and hospitals (14.2%). Other places of employment include contract-managed foodservice industries (3.6%), health and nutritive food industries (2.4%), food manufacturing and processing industries (2.4%), governmental agency (1.5%), education and research institutions (1.2%), and public health centers (1.2%).<sup>4</sup>

## CURRENT STATUS AND PROSPECT OF DIETITIANS' WORK AREA

### Business and Industry

The number of dietitians working in business and industry sector reach about 6,000 persons and their working place is mainly factories, office, government, and universities etc. Their main job duties are foodservice administration including menu planning, production and service, and food safety. The government handed out the strategic plans that implement multi-component activities including public health for health improvement of workers, physical exercise, nutrition, individual psychotherapy etc for controlling the increased prevalence rate of cerebro-cardiovascular disease in workers. According to this plan the dietitians have undertaken nutrition guidance activities to the workers through the development and posting the nutrition education material, nutrition education and counseling.

In addition, as the strategic plan of health improvement for the small business workers, the government established 'Community and Industry Health Center' in 2007, employed dietitians and demonstratively operated now. They fulfill health consultation and basic medical examination, precise physical strength examination, and exercise prescription. Moreover, recently, muscle and skeletal disease of the workers is spread, government agency had arranged various plans for the prevention of it. Put together, it is expected that dietitians promote a nutrition counseling project for preventing those diseases including osteoporosis and gout.

### Clinical Nutrition Field

As the life style has been changed and the population of the aged increases, the chronic degenerative diseases are also increasing, bringing about the poor quality of life and the drastic rise in medical cost. More and more people become interested in nutrition aging society. As a result, the demand for clinical nutrition dietitians who have the highly advanced knowledge on clinical nutrition is likely to be continuously increased.

In hospitals, the clinical nutrition dietitian will play a role to cure the patients from the aspect of nutrition with other medical staffs. Nowadays, most hospitals are recognizing the importance of nutrition service. So they will hire more clinical dietitians to provide the nutrition services such as food selection, cookery guidance, nutrition consulting and education for not only in-patients but also out-patients. In addition, considering that health diagnosis

centers, fitness centers, and weight management centers are being established, more clinical dietitians are likely to be needed for nutrition education and consulting. A total of 2600 clinical dietitians are working at such as general hospitals, hospitals, nursing homes, clinics, and health promotion centers. They are responsible for the clinical nutrition management including food service management, nutritional assessment, nutrition counseling, education and diet-rounding, medical staff and staff education, training of intern dietitians, managing diet-order-slip, research and improvement of quality.<sup>4-5</sup>

In the hospital foodservice sector, dietitians offered nutrition education and counseling based on doctor's prescription, and hospitals charged their service fees to patients. But since May 2003, the amendment of the Ministry of Health and Welfare Notification enabled clinical dietitians at hospitals to charge a medical nutrition therapy service fees officially to patients with one of following diseases: diabetes, hypertension, cardiac disease, and cancer. The clinical dietitians' role is reinforced because the qualification of the service provider of nutrition education confined only to a clinical dietitian. However, the service is limited to the above mentioned six diseases, and independent activities of dietitians in counseling were not guaranteed. Therefore, the need for improvement still exists.

In addition, health insurance allowance for in-patient meals began since June 2006. Moreover, the number of dietitians is considered in the insurance benefit standard. As a result, large scale hospitals as well as mid and small scale hospitals showed the intention of employing dietitians.

Recently, the direction of 'Hospital Performance Evaluation System' is extended to measurement of the quality of the medical service and is converted to the assessment of 'practical process-based' for patients.

Keeping pace with it, the KDA is trying to emphasize on the enactment of clinical dietitian system to practice quality nutrition management care such as nutrition education, counseling, nutrition assessment, therapeutic diet etc. as the assessment standards for the nutrition department. In future, for the more active placement of dietitians and the more positive outcomes, we will spread up the legislation of clinical dietitian system, independent nutrition counseling of dietitian and the accreditation of nutrition service charge.

### School Food Service

As more and more women are working these days, the demand for school meal service is also increasing. In 1998, the total elementary school in Korea executed the school foodservice. It was presented as Campaign pledge of 15th President-elect that secondary school food service program in high school would be totally implemented in 1999, and middle school in 2002.

As presented at Figure 3, school food service is under operation in 10,986 schools including elementary, secondary and special schools at the end of December, 2006. The participating student rate of school food service showed 95.5% (7,436 students). 86.4 percent of total objects chose self-operating foodservice and 13.6 % did contract-managed foodservice. The number of posting dietitian is 8,571, showing employ rate of 78%. This increase is expected to continue for a while, as elementary and middle school compulsorily has to select self-operating foodservice within a coming 3 years by the amendment of School Meal Act in 2006. Consequently it is expected to increase the employment of the nutrition teacher.<sup>6</sup>

In 2003, the regulation has been amended and passed by General Assembly that school have a nutrition education teacher stated in the School Meals Act and the Primary and Secondary Education Act. Starting from 2006, the nutrition teacher system is being run in schools. 1,700 nutrition teachers were, as the first time, appointed at school foodservice from March 2007. And another 2,386 nutrition teachers were posted since last September, 2007.

The nutrition teacher provides meal service, and plays a role as a teacher who helps students to form the right eating habits, to correct the unbalanced diet habit, to develop and diffuse nutrition education materials, and to teach the table etiquette. In addition, the nutrition teacher will also play a role as a leader who improves the dietary life of communities, while keeping close relation with Mother's Class, School Food Service Committee, and giving nutrition counseling for student/parents/teacher and extra curricula programs (e.g. food culture, obesity camp).

The anticipated effects by the operation of nutrition teacher system will be as follows: (1) maximizing the benefits of school food service with the application of educational course, (2) contributing to health promotion

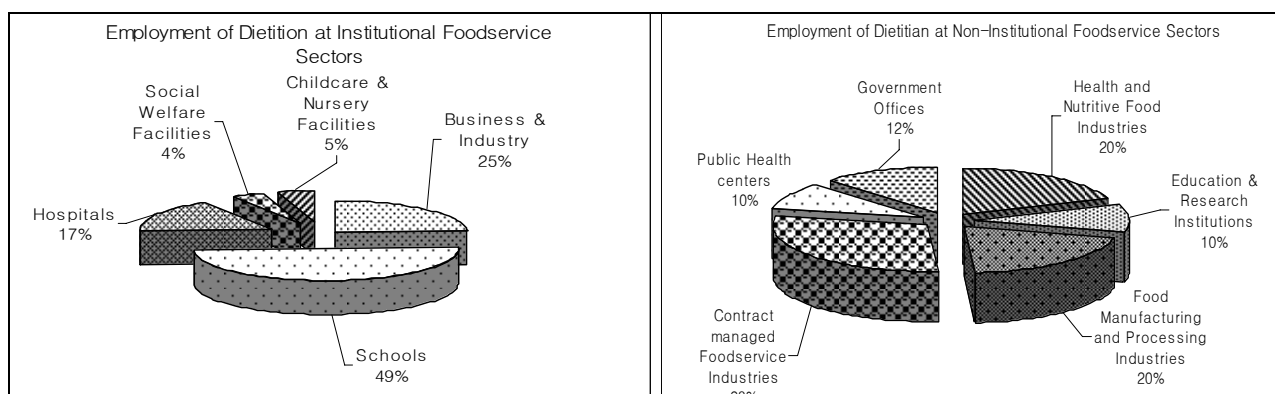


Figure 2. Worksites status of dietitians in Korea (2006)

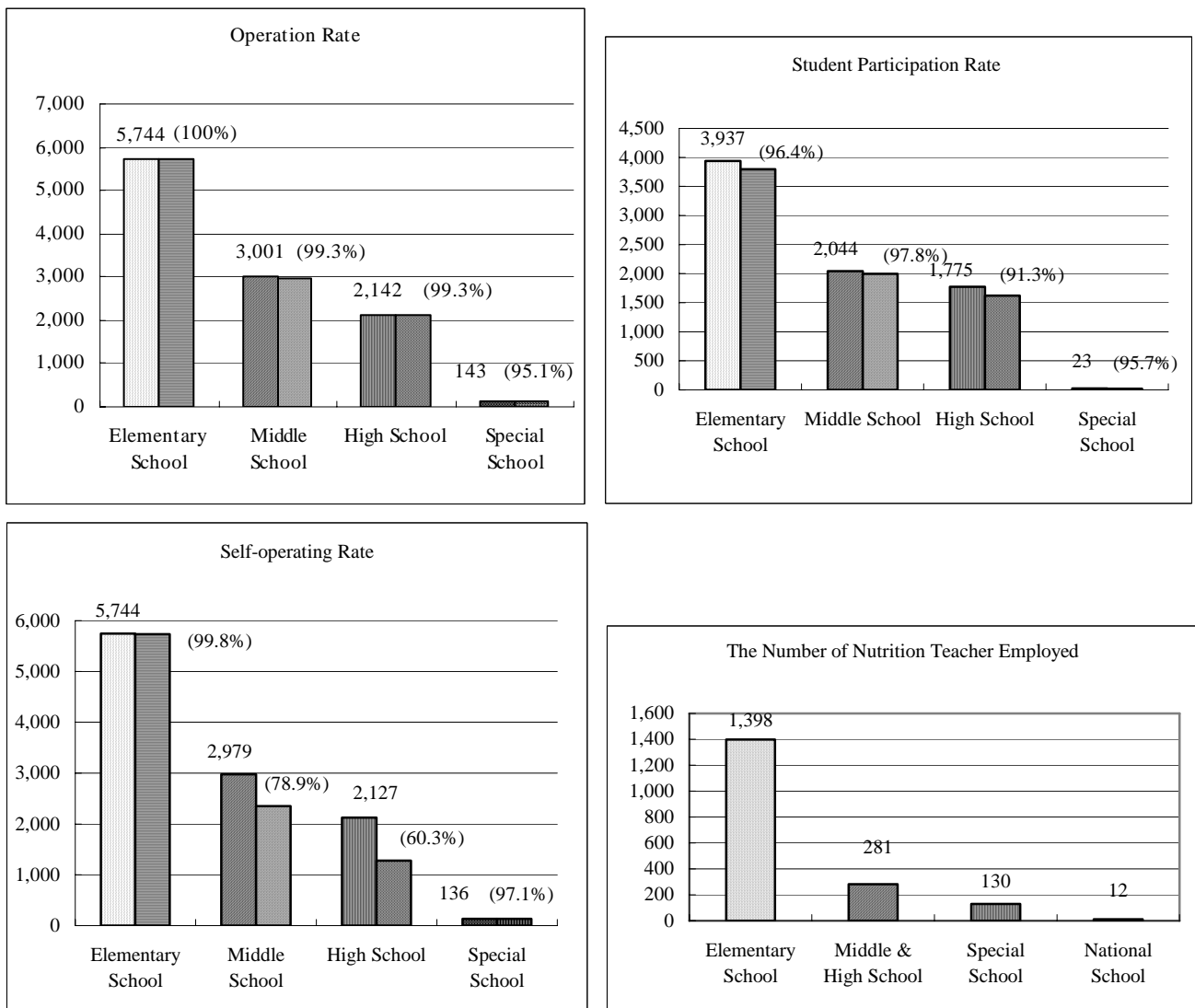


Figure 3. The status of school foodservice operations in Korea(2006-2007)

of peoples' whole life by preventing chronic degenerative diseases such as students' obesity and unbalanced nutritional problems, and (3) effectively conducting education for improvement of food life harmonized with school and home through the activation of undergoing and in-life traditional food culture, students health promotion, and improvement of dietary habit of students.

### Kindergarten

By the amendment of the Infant Education Act in 2005, it is ensured the legal base that kindergarten and childcare center with 100 or more infants should employ dietitian. They are practicing competitive foodservice and nutrition. The majority of nursery facilities (96.2%, 7,978) among 8,290 nationwide provide a meal service. The majority of kindergarten facilities (96.2%, 7,978) among management activities such as planning balanced meals for infants, nutrition education, and the formation of desirable dietary practices. 8,290 nationwide provide a meal service. The management of 4,138 public kindergarten facilities are under the joint operation with elementary school food service. 96.9 percent of facilities (7,728) chose the type of self-operated management. But the only 73.1 percent

(5,829) of facilities equipped exclusive kitchen. The number of more than 100 accommodation kindergarten facilities on the standard of the Infant Education Act is 6,300 (76%).<sup>7</sup>

### Community Health Nutrition

The food-originated disease such as obesity, chronic degenerative diseases are increasing due to the change of our dietary life. Accordingly, the importance of 'community nutrition improvement plan' for preventing chronic illness and promoting health has widely got to recognize among people. In response to such trends, the National Health Promotion Law in 1995 and the Local Public Health Law were enacted.

Dietitians' major roles in the public health center are the development of nutrition plans (e.g. nutrition education, survey and research for the nutrition status improvement, evaluation of national nutrition status, report for the state of institutional food service facility and guidance for food service management, and matters related with the dietary practices) which is clarified in the Local Health Act. But the employment ratio of dietitian doesn't go over 68 percent. In 2005, 151 dietitians were placed

into 134 public health centers from a total of 246 in Korea. In 2006, 261 dietitians in 169 public health centers with the effect of initiative of nutrition plans such as the healthy life practice plan, the Community Health Promotion Center, and the Supplemental Food Program for Women, Infant and Children (WIC). In spite of increase in quantitative aspect, the majority of employment is temporary position. Moreover, facility doesn't keep at least 1 dietitian. As a result, it is not fulfilled the professional nutrition service over the nationwide<sup>8</sup>. Therefore, the type of employment needs to be converted from temporary to regular job for continuous and professional implementation of various plans.

In accordance with the development and spread of governmental health practice project matched with the local situation, it is being stepped up the various plans such as the scale-up of community health improvement center in the public health center, model project of the WIC program, pilot project of health promotion hub-center for aged people, etc. Accordingly, it is anticipated the dietitian will be posted in each public health center.

*The WIC program.* The WIC program was practiced since April of 2005. This program provide pregnant, postpartum, breastfeeding woman, and infants and children under age of six years from low-income family whose a fixed income is less than 200% of the minimum cost of living with nutrition supplemental food, and nutrition counseling and nutrition education once a month. The WIC Program is operating demonstratively for 15 public health centers of nationwide<sup>8</sup>.

*Nutrition support program in the home care health management projects.* It is being operated the nationwide project of home care visiting health management that offers an integrative public medical service for the healthcare focused on the prevention. The project is conducted by mainly by the public health center from 2007.

The government also plans to increase the 2,000 staffs annually in 5 years. Among them, 85 dietitians are recruited and conduct their roles of home care visiting health management plan. It is expected that the professional dietitians will be reinforced gradually according to the extension of plan.

### **Social Welfare Facilities**

Although the dietitian posting into the social welfare facility was stipulated in the governing regulation around 2000, it was not activated due to lack of the financial support from government. As the budget of labor cost for dietitian is supported from government since 2002, 670 dietitians (41.7%) were posted in 1,608 social welfare facilities which accommodate more than 50 people.<sup>8</sup>

Like this, the social welfare facilities are quantitatively increased. However, quality care service is continuously demanded for the promotion of nutritional health of residents. Confronting problems are lack of the insufficient food service facility, deficient budget of meal cost support, shortage of skilled staffs, etc. Especially, it is expected the dietitian posting into the various types of welfare facilities for aged people will be extended as the

population of aged generation will be increased, and the strategic planning for this should be developed.

### **Childcare Center**

With the creation of dietitian posting standard in the Infant Education Act in 2005, it got compulsory to place the dietitian into this facility that accommodates more than 100 infants. Nevertheless, the ratio reaches only 35.9 percent by 781 dietitians among 2,177 facilities.<sup>9</sup> The expansion of childcare center comes to the first priority policy as one of promotion for birth and women social activity. Consequently, it is planned the number of public childcare facilities will be double until 2010 and the number of private facility will be also increased with the government support of childcare fee. As a result of these influences, we can expect that the arrangement of dietitians will be enlarged in the close future as it comes the demand for the quality improvement of social childcare service and the importance for infant nutrition management.

### **AUTHOR DISCLOSURES**

Tong-Kyung Kwak and Hye-Ja Chang, no conflicts of interest.

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