

# Nursing Education Systems in Korea, China and the United States of America and its Future Directions

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**Background.** Korea and the People's Republic of China received their nursing traditions from European and the American missionaries in the late 1800's. However, the stages of nursing education development and its standards are not same among countries. Korea, People's Republic of China and the United States have gone through various internal socio-political, hierarchical changes which impact development of its nursing education systems in the past.

**Purpose and Methods.** In this paper the authors have endeavored to review undergraduate nursing education systems in Korea, China and the United States in consideration with their unique historical social and political background of its development. Result: Korea has two nursing education systems: associate and baccalaureate. China developed three types of nursing education systems: certificate, associate and baccalaureate. The United States, one of the countries, which nurtured the modern nursing education, has four types of nursing education systems: certificate, associate, diploma and baccalaureate. Furthermore, the authors have discussed on several core and common issues to be considered for future directions on nursing education systems for three countries.

**Key Words:** nursing education system, Korea, People's Republic of China, United States.

## INTRODUCTION

Korea, the land of morning calm, and the People's Republic of China, known as the sleeping dragon in the East, shares several commonalities. They not only share the same continent, but also value similar eastern cultures that strongly inherited by the Confucianism from a single ancient ancestor. Not only that, they both received their nursing traditions from European and the American missionaries in the late 1800's (Lin, 1938; Davis, Gan, Lin & Olesen, 1992; Chan & Wong, 1999; Lee, 1984).

However, the stages of nursing education development and its standards are not same among three countries.

They have gone through various internal socio-political, hierarchical changes which impact development of its nursing education systems in the past. Even today, professional education and practice are confronting major changes in health care, which are affected by political and socioeconomic world. Korea is coming out from long dark tunnel of financial crisis. They are striving for an improvement on educations. Making reforms in health care delivery system to keep up with the international trends in order to survive in the highly competitive global village. China is also making reforms and opening up to foreign countries to catch up with what they had missed in the past. They are adopting not only medical technologies and engineering but organizational systems and knowledge. They are waking up from a long

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nap, which they had taken during the communist's reign. The United States, one of the countries, which nurtured the modern nursing education, has made enormous advancement in nursing education and practices. But the consecutive decline in baccalaureate program enrollments and nursing shortage crisis seem inevitable (Daley, 2000).

In the past, the United States exported many academic valuables, such as theories, standards, principles, employment systems and many others, to Korea and China. We are living in a society where technology and engineering as well as the pool of knowledge are rapidly changing and readily adopted by the others. Not only technology, but also complications that follows from it in one country becomes readily accessible and becomes reality to others. Thus in the future there will be no marked cultural or educational distinctions between countries.

McBride (1999) predicted that in the future, the consortium approach education would grow. Institutions and programs will join forces across state and national boundaries to collectively offer the full range of academic opportunities. Already there is exchange of students, faculties and transfer of credits between institutions and across nations. Many are aspiring for better educational opportunities. Therefore, to be able to keep up with international trends, innovative and sound education is crucial.

Education is where human resource supply is being initiated. The education is responsible to supply competent and qualified graduates who are capable of providing professional service to enhance the quality of life of the people in the society. The education system determines the program length, its contents, and its curriculum. This determines qualities of students being educated (Shin, 1999).

In this paper the authors has endeavored to review undergraduate nursing education systems in Korea, China and the United States in consideration with their unique historical social and political background of its development. Furthermore the authors have discussed on several core and common issues to be considered for future directions on nursing education systems for three countries.

## DEVELOPMENT AND PRESENT NURSING EDUCATION SYSTEM

### 1. Korea

The official nursing education in Korea was started by a missionary nurse, Margaret Edmunds, in 1903 as a Nurse's Training School at Women Hospital (Bogu Yeokwan), which later became Ewha Women's University Hospital (Lee, 1984; Lee, 1991). Missionaries ran the early Nurse's Training Center in Korea. It did not receive much attention from the government or from the society as it was in the midst of World War II. At that time most directors of nurse's training centers were physicians, and because of that the content of nursing education was low in quality (Lee, 1991). Institutions run by missionaries from Europe and the United States were more focused on hospitalized patients, a patient-centered approach. However, the national or private training center was focused more on the nurses' role as the physician's assistants. This focus came from the Japanese influence.

In the mid 1940's, as the government became independent from the Japanese colony, all the school systems were transferred their superintendence to the Ministry of Education. In 1947, the nurse's training center was promoted to a High School for Nursing. At that time three years of nursing education was viewed, as equivalent to a high school education and major qualification for admission to the school was junior high school diploma. At this time the length of a nurse's education was unified to three years across the nation (Lee, 1991). In 1949 the nursing discipline took a higher step in its advancement with its registration as a regular member in the International Council of Nurses (ICN). But the Korean War, which broke out in 1950, interrupted this progress.

After the Korean War, which ended in 1953, the Korean government focused their efforts on developing an industrialized and modernized country. The high schools for nursing were categorized into technical schools and because of this influence; the schools changed their names from nursing high school to a technical nursing high school. However, by the latter part of the 1950's the nursing leaders presented a proposal to the government to either promote or abolish the technical level of nursing education.

In 1960, as the third republican government proceed-

ed toward modernization, an open economy, and indoctrination, the Korean GNP increased from \$82 to \$243 (Korean Bank, 1982) and the lives of people in Korea became stabilized. This strengthened the government's intention of promoting a health policy and education, as well as strengthening the public welfare. In 1962, because of these social changes and their influence, the Korean government carried out reforms in education. At this time the technical nursing education was not considered sufficient to meet the needs of patients. This required a greater depth of practical knowledge incorporated into the program. Thus the nursing school system was reorganized from a Technical Nursing High School to a School of Nursing and accepted only those who had completed 12 years of education (Hong, 1973; Lee, 1984).

As the country grew stronger economically, the parents' burning desire for higher education for their children also grew. There was an increased desire for women's education, which facilitated the development of the nursing education. In 1955, the first baccalaureate-nursing program was started at the Ewha Women's University, department of nursing. And in 1960, the graduate program was started in the same university (Lee, 1991). Up to this point the nursing education was focused on technical aspects. The masters' education on the other hand, lifted the nursing education to an academic level. In 1968, the department of nursing at Yonsei University was changed to a school of nursing and laid a firm foundation of academic development of nursing education in Korea.

In 1970, as the government grew stronger economically and with the GNP increase to \$1,546 per person (Korean Bank, 1982), the Korean government strategically carried out a plan to revolutionize higher education to increase the number of professionals for the highly industrialized structure. The Korean ministry of education recognized junior schools as an official regular school system. Because of this influence, the school of nursing was once again promoted to a Junior Technical College for Nursing. Although the length of education for other junior colleges were two years, the nursing education was established as three years because of the influence of leaders in nursing education and in accordance with public opinion (Lee, 1984; Kim, 1998; Lee, et al., 1991).

In the late 1970's to the early 1980's, with the advancement of technologies and full recovery from the Korean War, the quality of life was recognized as an im-

portant part of people's lives. The government formulated a policy on "social security and the promotion of national welfare" which accelerated the launch of nationwide primary health care. Due to changes in public health and education policies, the objectives for the Junior Colleges of educational standards rose. These standards were designed to help train medium standing professionals for the development of the country. In 1977 the Junior Technical College for Nursing was promoted to Junior Nursing College (Lee, 1984). The major qualification for entrance into the program was to be a high school graduate who passed the college entrance examination. It was only from this that the graduates were eligible to transfer to a higher level of education. Since 1977, the nursing education was to be delivered in only a college setting which led all the hospital schools of nursing, diploma programs, to be closed within the country. From 1979 they started to confer associate degrees. Since 1978, the doctorate program has been established in the Yonsei University School of Nursing.

In 1997, the entire junior nursing colleges became nursing colleges where they educate associate level nurses, and baccalaureate-level nurses are educated within the university setting.

At present, there are two nursing education systems in Korea: Associate and baccalaureate. Associate programs are dominant, and there is only one entry level: high school graduation.

The schools select the students according to College Entrance Examination scores and interviews. Some schools give out their own examinations on top of the college entrance examination.

#### 1) Associate Degree Program (ADN)

In Korea, associate degree programs have been developed from the diploma nursing programs. It offers 3-year nursing education. In order to be accepted into the program, students should have a high school diploma or the equivalent. Night programs accept nurses' aids who have one or more years of clinical experience. There are 61 institutions, which offer the Associate degree program and produces 8,692 graduates each year (Korean Nurses Association, 2001).

#### 2) Baccalaureate Degree Program (BSN)

Since 1955, Baccalaureate nursing education has been delivered within the university setting. The Departments of nursing or schools of nursing offer the program. In

1998(Kim, 1998), there were 47 institutions that offered the degree. However, at present there are 51 institutions that grant baccalaureate degrees in nursing, and produce 2,651 graduates each year. Among these, eight are national and 43 are private institutions (Korean Nurses Association, 2001). The baccalaureate degree can also be obtained through the University of the Air or a RN-BSN completion programs and self-education system. In order to enroll in these education programs they must be graduates from three- year nursing college along with an RN license (Kim, 1998).

## 2. China

In 1884, Elizabeth McKechnie, a graduate nurse from the United States of America, introduced the Florence Nightingale system of nursing at Shanghai West Gate Red House Hospital, Shanghai, China (Lin, 1938; Chan & Wong, 1999). In the beginning, practical care of the sick was taught informally by missionary physicians until the establishment of the first training school for Chinese nurses, by Ella Johnson at Liang Au Hospital, Foochow(Fuchou), Fukien in 1888 with two nurses in the first class(Lin, 1938; Holtzen, 1985; Davis, et al., 1992).

In 1915, the establishment of Peking Union Medical College (PUMC) by the Rockefeller Foundation of the U.S.A. influenced the standard of excellence for nursing throughout the country up to the present. The PUMC nursing school was to meet the same standard of excellence as that of PUMC medical school, which only accepted students who had a minimum of two years of college and who were fluent in English. The emphasis was to be on education rather than on service. In 1922, PUMC became the first bachelor of Science program in nursing in China. This was only six years after the first BSN program in the U.S. was opened at the University of Minnesota in 1916. Because of this emphasis in high standards of education, the graduates have held leadership positions and have had an immense impact on nursing education and service in China (Chan & Wong, 1999; Davis, et al., 1992).

World War II provided a great hardship for Chinese nursing. Many schools have closed and the quality of the education did not make much advancement (Holtzen, 1985). After the defeat of Japan, the Chinese Nurses Association and the National Health Administration made plans to reopen former schools, and expand health care facilities (Hsu, 1947 in Holtzen, 1985).

Another interruption in the development of nursing education came with the Communist Liberation of China, in Beijing (Peking) in 1949. Mao Zedong, Chairman of the Chinese Communist Party, brought collectivization of property as well as agricultural products. He also nationalized all industry, commercial enterprise and institutions. This highly centralized development strategy of the 1950's was patterned after the Soviet model through the Soviets' financial and technical assistance (Iammarino, 1983). In 1952, dual nursing education systems, college level and technical level, were unified as a health school-based nurses' training program (Technical Schools). They received Junior high school graduates. Although the government made advances in medical education, nursing education did not get much attention. Because of the nation's economic difficulties after the war, nursing education was considered good enough at the Junior Health School level (Li and Acorn, 1996). At this time the China needed to accelerate the production of large number of nurses to assume medical responsibilities owing to the lack of physicians. The nurses were to help control the high prevalence of maternal and child death, infectious disease which was the leading cause of death in China. At that time, nurses were not only viewed as non-professionals but they were required to only "assist" physicians. Although the nursing education in Junior Health School was formulated without any communication with foreign countries, the program emphasized "Chinese nursing", acupuncture, massage, baguan, tuina, and these skills were taught and applied in practices. Since there was very limited education available for women in China, nursing career, though it was only technical level of education, was viewed as a highly attractive profession for women.

During the time of Cultural Revolution, from 1966-1976, China was closed to the Western world. Educational programs were disrupted; many schools were closed, unified, or reorganized lowering its standards. Higher education in China came to a virtual halt with no new student enrollments until 1970 (Iammarino, 1983). At this time, Professors and medical staff often were persecuted or sent to rural areas to learn the ideology of socialism. The rural medical service was delivered by Barefoot doctors, who were educated for a short period of time.

With the death of Mao Zedong in 1976 and under the new leadership of Deng Xiaoping, a drive for rapid industrialization was launched in 1978. China adopted the

'four modernization' emphasizing technology, agriculture, science, and national defense. In order to have international competitiveness with other countries, science and technology were highly emphasized. In 1995, to educate competent professionals, needed to establish modernized society, the government put financial investment into the education 22 times greater than in 1975((National Bureau for Statistics, 1997). With financial advancement and increased communication with the western countries, the Chinese life style changed and women's position and their rights were voiced out. As the result, the educational institutions have been increased nationwide.

In 1979, the nurse's management system became independent from physician's management system. During the early 1980's the Chinese government realized the urgency and importance of developing nursing and nursing education. In 1981, the first three-year nursing program was opened at Guangzhou, and in 1983, the first baccalaureate nursing education program, since the first BSN program in PUMC had closed in 1952, was established at Tianjin Medical College (Li, 1999; Davis, et al, 1992).

At the present, there are three types of nursing education systems: Certificate, Associate, and baccalaureate. They have middle school and high school education as the two levels of entry (Chan & Wong, 1999). There are movements to abolish the certificate nursing programs or to promote them to an Associate program and at the same time gradually increase the number of associate and baccalaureate programs.

#### 1) Certificate Program

Health Schools operate certificate programs and produce nursing technicians, called Hushi. These nursing technicians dominate the work force in the hospital in China. Among all the practicing nurses in China, 95% percent are the nursing technicians who are being trained at the hospital-affiliated health schools. Recruited students are mostly middle school graduates or of equal qualifications. The school that produces Hushi is also described as junior health school, technical school of nursing or health school-based nursing training. A four-year course is offered to the students and upon completion of the program, the students are required to sit for the State Nurse Registration Examination (RN). Those who pass the examination are qualified to work in the nursing field, mostly in hospitals. According to Chiu

and Lee's study (as cited in Chan and Wong, 1999), there were 530 nursing schools of this nature nationwide, which share a common curriculum that has been set by the Department of Health. The health schools trained about 40,000 nurses per year. However, since then, many Health Schools throughout the China have been closed or promoted to a higher level of education and the number of this certificate program has decreased to 465 in 2001(Shen, 2001).

#### 2) Associate Degree Program (ADN)

Associate degree program is a form of higher-level nursing education in China. After the completion of the program, students are given an associate degree in nursing. These graduates are called as Hushi, nursing educators, which has a different meaning from Hushi, nursing technician. The education is delivered in the three-year technical colleges' department of nursing. Persons qualified for entrance are high school graduates or graduates of Health schools. In 1999, there were 40 institutions offering nursing studies at the diploma level, but now there are 121 institutions throughout the nation (Shen, 2001). An associate degree can also be obtained from alternative institutions like Open Universities (Distance education program), Night Colleges, Self-education programs (should be accompanied by clinical practice). In order to enroll in these alternative institutions students must graduate from a health school and have three years of field experience. Graduates can engage in both clinical nursing and clinical teaching. According to Chiu and Lee's study (as cited in Chan and Wong, 1999), These institutions train around 1,000 students each year. Licensure is given without national examination.

#### 3) Baccalaureate Degree Program (BSN)

In 1999, there were about 18 medical universities in China that offer Baccalaureate degree programs but, in 2001, the number of institutions that offer BSN degree has increased to 62 (Shen, 2001). The baccalaureate degree is offered mostly as a five-year program. A four-year program is being initiated in few schools as a trial basis. The qualification for entrance is high school diploma or health school certificate. The License is given without national examination. Graduates from these degree programs work in clinical nursing, education and management positions

### 3. *United States of America*

The New York training school, a hospital-based diploma program attached to the Bellevue Hospital, was first established in 1873, and was the first nursing school in the United States to be modeled after the Florence Nightingale school at the famous St. Thomas Hospital in London (Schorr, & Kennedy, 1999). In the early years there was a class difference between the women's colleges and the nurse's training schools in that the college tended to be made up of upper middle class students while nursing schools attracted primarily lower middle class students. The schools also had difficulty in obtaining high school graduates and had a hard time convincing young women to enroll because it required a full year to learn to care for the sick (Dietz and Lehozky, 1967). However, early nursing schools in the United States tried to follow the principles established by Nightingale, but only partially succeeded and only for a short time.

Political and social forces at the turn of the century, World War I and the change from nursing in the home to the hospital setting resulted in a rapid expansion of hospitals with a sudden increased demand for nursing staff. Schools of nursing were seen as the answer since students would be a steady and inexpensive supply of bedside nurses. With the proliferation of schools operated by hospitals, with physicians doing the lectures, and with students providing long hours of care, the original standards for nursing education established by Nightingale were soon forgotten except in a few outstanding schools (Kelly & Joel, 1995). By 1880, there were 15 schools, and by 1900 there were 432, as hospitals proliferated (Schorr & Kennedy, 1999).

The first university nursing program in a collegiate institution was started at the University of Minnesota in 1909 (Doheny, Cook & Stopper, 1992). However, it was not a degree program. Students were to meet university standards for admission and class work but after three years they received a diploma from the university, not a degree (Gray, 1960). With the continued efforts to improve the nursing education program starting in 1917, with the advent of the National League of Nursing Education (NLNE) (Boullough and Boullough, 1984), World War I called nurses to help wounded soldiers. In order to meet the nation's demand with only a handful of nurses available, the committee on Nursing of the General Medical Board of the Council of National Defense shortened some nursing courses to two years

and established the Army School of Nursing in 1918 (Dietz and Lehozky, 1967). After the war, attempts to examine and strengthen nursing education resumed. In 1918, funds from the Rockefeller Foundation helped to form a committee to study nursing education specifically, for the improvement of hospital training programs. The Goldmark Report in 1923 that resulted from this study led to the opening of several more collegiate or university-based nursing programs. Concurrently, because of their recommendations for the improvement of the program and setting up of an accreditation committee, many substandard hospital schools closed (Boullough and Boullough, 1984). As the struggle to raise educational standards progressed, nurses and hospital administrations took the view that all nursing tasks did not require a full three or four year education program.

During World War II nursing assistants and practical or vocational nurses were trained to assist registered nurses in hospital settings. After the war, these programs not only continued but also multiplied rapidly. Practical nurse's education became formalized with one to one and half years of study followed by state licensure as preparation for practice. Their graduates practiced under the supervision of registered nurses and usually did not develop technological skills. In 1938, the first license for practical nurses was first established in New York State and this idea rapidly gained currency by the crisis in nursing brought on by World War II (Boullough and Boullough, 1978). In 1941, with World War II in progress, large numbers of nurses were again needed. The government passed a Nurse Training Act that created the U.S. Cadet Nurse Corp (Dietz and Lehozky, 1967). This provided free tuition, fees, uniforms and stipends for students to study nursing. This increased the numbers of nurses educated with federal funds.

Following the war, the Carnegie Foundation funded a study of nursing education and service to learn what level of nursing education was best, not for nursing itself, but for society. In 1948, the report, *Nursing for the Future*, recommended that nursing education be moved from hospitals to universities. In spite of the recommendations from society for baccalaureate education in nursing, a movement of nursing education into colleges and universities proceeded slowly. Hospital administrators were not convinced that better educated nurses meant better nurses, nor were they ready to give up their built-in supply of hardworking and dedicated care providers—

namely, student nurses. Therefore, hospital schools continued. After World War II, in the early 1950's, a new level of nursing education emerged. World War II brought advancement in medicine, which leads to improvement on medical technology, and this in turn had a significant effect on patient care. However nurses were not enough to meet patient needs. With the growth of community colleges and the investment of federal government, the associate nursing education program was newly launched at Teacher's college, Columbia University by Mildred Montag in 1952 (Hasse, 1990). The program was designed to produce nursing technicians whose functions would be narrower in scope than those of the professional nurse, but broader than those of the practical nurse. They would assist in planning, implementing and evaluating nursing care under the supervision of physicians and baccalaureate level nurses (Hasse, 1990). The programs would be offered in Junior Community Colleges, and would be a terminal degree. To the surprise of many, the original plan of the associate degree graduate to assume a technical role and function under the baccalaureate nurse never materialized. Graduates wrote the same licensing examinations as the baccalaureate graduates, were employed along side of baccalaureate nurses and sometimes in the place of them. Now hospital schools of nursing (Diploma programs) have been phased out. In 1965 (American Nurses Association, 1966), The American nurses' association designated 1985 as the year the baccalaureate degree would be at the level of entry for professional practice.

Today, In United States of America, baccalaureate programs are well established. At the same time although the associate degree nursing and licensed practical nursing programs are also strong, the baccalaureate degree is gradually emerging as the qualification for entry into professional nursing practice.

There are four types of nursing education systems in the U.S: certificate, associate, diploma and baccalaureate. All have a only one entrance level, high school graduation.

#### 1) Certificate Program (Licensed Practical Nurse (LPN)/Licensed Vocational Nurse (LVN) Program)

Practical Nurse Programs prepare the students to become Licensed practical nurses or Licensed vocational nurses. These nurses can deliver nursing care to patients under the supervision of registered nurses or doctors. Since the 1960's, all practical nurses have been required

to pass a licensure examination before they can practice. Now, most of the programs continue nine months to 12 months. There are 1,100 state-approved programs in the United States now (U.S. Department of Labor, 2000). Education institutions are Vocation/technical Schools, community colleges, Universities, hospitals, nursing homes and the Red Cross. Among them 93% are private institutions and only 7.0% are public institutions.

#### 2) Associate degree Program (ADN)

This is the lowest level of the technical nursing program for registered nurses in the United States. Educational objectives are to prepare registered nurses who can deliver direct bedside nursing care. These nurses are being educated at two-year community colleges and 4-year colleges throughout the nation. This program provides the education for nurse generalists who can deliver nursing care at acute, long term care settings with competence in knowledge, skill and attitude. In 1997, there were 892 ADN programs nationwide and more than 6,400 students attending (Catalano, 2000). In 2001, there were 848 ADN programs throughout the United States (Nursinghands, 2002).

#### 3) Diploma Program

The diploma nursing education is delivered in Hospital settings for those who wish to be a registered nurse. From the 1950's to the 1970's many diploma programs, which could not comply with NLN standards related to nursing curricula, closed (Catalano, 2000). Many diploma programs during this period became associated with universities and converted their curricula into degree-granting programs as the society view nursing as a full profession. In 1997 -1998 there were 121 accredited diploma programs in the United States. However, there are 77 programs now and these diploma programs are slowly fading out (Nursinghands, 2002).

#### 4) Baccalaureate Degree Program (BSN)

The aims of the baccalaureate nursing programs are to educate nurses who can function as caregivers, patient advocates, researchers, educators and leaders within the discipline. Nurses who graduate from this program deliver care to individual, family, group and community in structured or non-structured settings. BSN degrees can be obtained by studying at colleges or universities and also through RN-BSN programs after ADN or diploma programs. At first this was a 5-year program, which con-

sisted of two years of liberal arts and three years of nursing Education. However, the program was changed to four years of education. From 1997-1998 there were 529 accredited BSN programs throughout the country (Catalano, 2000). Now, there are 569 BSN programs and 27% of enrolled students are RN-to BSN students (AACN, 2001).

## DISCUSSION

The nursing education systems in Korea, China and the United States have several similarities and differences. One major similarity can be seen in the fact that all three countries have a hierarchy in their nursing education systems. We have learned from the history that even though both Korea and China received their nursing education systems from the United States in the beginning, they have developed dual or triple education systems according to their internal socio-political structures. The Republic of Korea has two education systems for nursing, ADN and BSN program, whereas China has three, Certificate, ADN, BSN, and the United States operates four different levels of nursing education, Certificate, Diploma, ADN, and BSN.

The stratification in the nursing education system has been reported as a one of the factors that create various problems within the discipline. It drains energies, which leads to burnout. These problems can be minimized through innovations in nursing education system. The career ladder system can be a one of solution to narrow the educational gap between nurses.

In the past, there has been enormous number of papers on minimum educational requirement for beginning professional nursing practice in the U.S. The 1965 position paper (ANA, 1965) and the 1985 proposal, which both were to reach a consensus on the issue of basic educational preparation for entry into practice, never became reality. This was because the largest group of practicing nurses who saw themselves as professional nurses had no preparation beyond diploma in nursing at that time. These proposals were not enough to convince a significant number of those who will be affected by the changes (McCloskey & Grace, 1990). At the present, there are 85% in Korea and 95% of practicing nurses in China are graduates from a program beneath the BSN level. However, the trend of nursing education level is moving toward baccalaureate level in Korea, China and in the U. S. (Kim, 1998; Shen ning, 2001; Catalano,

2000).

Increasing the level of nurses' education would be meaningless unless it has benefits for the society as well as for individual nurses. According to Bozell' survey (2001), the lack of growth was found to be a first in top 10 reasons for nurses leaving the job. Encouraging nurses to upgrade themselves through career ladder system can be a way to increase the sense of professional growth. This is supported by Lambeth and Milburn's study (1994). They reported that BSN students have greater skill, competency than LVN students. Young et al (1991) also reported that BSN students are likely to perform the high skill tasks of nursing diagnosis, physical examinations, psychosocial exams and evaluation of patient outcomes more frequently than lesser-prepared nurses. Having sense of professional growth is important because it can be one of the ways to increase the retention rate of nurses at working site after the graduation, which can help to prevent the human resource crisis in the future.

In Korea, ADN graduates have several means to earn BSN degree. Since 1992, University of Air and Self Education System has opened, RN-BSN completion has started in 1993 and at present there are 21 universities offering the program (RN-BSN Dean's Committee, 2002). In China graduates from the associate level can pursue the higher degree not through formal education system but through Zhixuechengcai examination. The certificate, ADN graduates study various subjects on their own and can try for an examination (Li, 1999).

The wide variety of career ladder program can be seen in the U.S. LPN/LVN-to-ADN ladder (Program where LPN/LVNs to obtain ADN degree and take the NCLEX-RN, CAT to become licensed as registered nurses), LPN/LVN -to-BSN, ADN-to-BSN (program where ADNs to earn BSN degree) and ADN-to-MSN are some examples of career ladder programs that are offered in the U.S. (Catalano, 2000).

It may take time to work toward a baccalaureate entry into practice (BETP) in Korea, China and in the U.S. Until our discipline can agree on standardization of the nursing education systems, innovative career ladder system or nursing program articulation seems viable mechanism for working toward BETP.

The nursing education can grow stronger only when there is recognized needs by the society as well as professional disciplines. Today, the need for well-trained and professional nurses has not been greater in the nurs-

ing history. Recently the United States, who nurtured the modern nursing education, has been facing critical human resource crisis, which has not yet considered as a problem in Korea and China.

Predictions indicate that the next few years will likely to be a critical period for nurse supply and demand (Ackley, 1999). This shortage crisis did not happen suddenly. In the United States, there have been serious warnings about expected nursing shortages since 1998. The American Association of College of Nursing noted a 4.7% decline in baccalaureate program enrollments for fall 1999 and this was the fifth consecutive annual drop in enrollment (American Association of College of Nursing, 2000). Drop in enrollment is not the only factor responsible for the human resource crisis. The aging nurse workforce can also account to this shortage crisis. In the U.S. half of the nation's RNs will reach or be near retirement age within next 15 years. The average age of employed RNs in 1998 was 42.3 years (US population of RNs) and Only 9% of the nation's 2.5 million RNs under age 30 in 1996 (Ackley, 1999). This phenomenon of aged workforce in the U.S is partly due to flexibility on student's age when they enter the program. Besides the aged workforce, faculty shortage, resource limitation and a shortage in clinical training site are also reported to be responsible for the enrollment down (Ackley, 1999) in the U.S. In Korea and China the students enter into the program right after the high school graduation and complete the program without delay. Thus, average age of practicing nurses are much younger, but the increase of women's career opportunities can be a threatening factor in recruitment of qualified students. If we look back in the U.S. history, when there was a strong economy, numerous career opportunities appealed students (Minnick, 2000). Not only that, with a increase in participation of women to society as the roles of women extended, there were wide variety of careers attracted students who might otherwise have chosen a nursing major. The general economy has grown in China (National Bureau for Statistics, 1997) and in Korea (National Statistical office, 2000), and with an advent of new technologies and careers, such as computer science, in China and in Korea; it can easily be expected to have decrease in enrollment. Not only that, as we reflect how nursing tradition has launched to Korea and China from the United States, it is not difficult to anticipate the cyclical shortages and surpluses in the United States to become reality in Korea and China in the future.

Therefore, continuous effort on the improvement of nurses image in the society is required in both countries. The quality of education in each level, associate and BSN in Korea; certificate, associate, and BSN in China, should be assessed periodically. The program's objective, faculty qualification, student outcome, finance and facilities should be evaluated through recognized accreditation body.

The United States had experienced this nursing shortage in the past and have successfully compensated through nursing education responding its enrollment through aggressive recruitment efforts, and employers providing improved compensation packages. However, with a continued increased demand for nurses, supply of nurses through enrollment number alone is less optimistic. To solve this anticipated shortage crisis proactively and effectively, Korea and China will require significant, prolonged collaborative efforts among leaders of health care delivery systems, and professional organizations as well as government agencies.

The problem in the United States today should help policy makers, professional associations and educators in Korea and China to raise some long-term policy and employment issue that the 'today-oriented society' might otherwise ignore.

Policy makers should establish a committee to analyze nurses' data nationwide. This should help professional body and administrators to be aware of data trend on admission, enrollments, turnovers, employment trends so the short-term market corrections can take place. Professional association should develop strategies on improving the image of nursing and lobby the government for increased funds for nursing education

## CONCLUSION

Within the past twenty years, the development of college and university based education has progressed rapidly on all continents around the globe. In Korea, China and in the U.S. it is certainly apparent that while barriers to higher education for nurses continually arose throughout the history, political events, socio-economic influences and great leaders also appeared to move nursing forward. In all three countries, the giant steps have been taken both forward and backward but the overall result is one of tremendous progress in the development of nursing both as a discipline and a profession. Some of the problems the nursing educations in Korea, China and

in the U.S. faces at this time are of their own making. Some are the results of political and social factors. Some are related to preserving multiple levels of education without differentiation of practice. But rather than looking back the history and being discouraged from the mistakes we need to learn from the successes and failures from each other.

The specific aims of nursing can be different for each country. However, many of the general goals are similar. We believe that our common goal is to provide a high quality of inexpensive health care to entire populations. We share similar beliefs concerning the importance of preventive health care and strive to offer a sound education to motivated potential nurses.

Reforming nursing education is not going to be easy. It should not be done in haste. First nursing must consider core issues and examine possible options to reach a consensus. The plan should be adopted in a timely fashion.

It is important that our discipline is to survive in next century as members of a health care delivery team. If we were to join forces across the nation and national boundaries to offer a collective range of academic opportunities to our next generation, it is important for the members of nursing profession to join and work together to achieve its objectives.

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