

Nursing education in China in transition

Yeo-Shin Hong

Oita University of Nursing and Health Sciences

Rika Yatsushiro

Oita University of Nursing and Health Sciences

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Abstract

The study was carried out to clarify our understanding of current state of nursing education in China as a part of international studies in nursing. The information contained in this report are from the reviewing of literature and site visits made to a part of China including two provincial hospitals affiliated with medical colleges and schools of nursing in Shandong Province and the School of Nursing, Peking Union Medical College in Peking. In this study, transitional state of Chinese nursing education is described and analytically viewed from historical, political and socioeconomic context in order to comprehend the meaning of transition in its relation to contextual environment. Issues and problems of nursing education in China were delineated from the perspective of emergent health care needs related to socio-demographic changes and technological and socioeconomic advancement and from the perspective of current pattern of education and utilization of health personnel. For an international cooperation between China and Japan, focus placed on community health nursing with all related fields of study was recommended as contributing most to the advancement of Chinese nursing and health promotion of the population.

Key words

nursing education, transition, China, career ladder problems, international cooperation

1. Introduction

China, with its more than 1.2 billion population and vast area of land, is now experiencing a tide of accelerated change in all aspects of society since the inducement of an open market policy, and it has become of interest to all fields of study concerned with humanity. In this era of globalization, the health and well being of the world's population has become a particular concern to all committed. Nursing as a health profession also has its share of concerns and responsibilities.

China, Japan and Korea neighbor each other and share much in common in culture, physical characteristics and way of life. However, unfortunate historical paths shielded us off for so long that we need to begin to study each other in order to increase our mutual understanding and cooperation as neighbors. Our interest, therefore, led us to study about the health problems, health care and educational systems, and health personnel utilization patterns in China, with particular focus on nursing and nursing education.

In retrospect, the whole health care world was shaken

in the early 1970s by the news of barefoot doctors in China providing for the basic health care of rural communities. This provided an impetus for other countries to reconsider the traditional system of providing health care for their own populations, and this grass roots approach to basic health care set the model for the promulgation of the strategy for Primary Health Care by the WHO (Basch, 1999).

This was an occasion for the Chinese government to critically review the efficacy and validity of its total educational system. The higher education system for health care professionals and the existing health care system in the country were denounced for not fulfilling social expectations, to the extent that 85% of the total population had no access to health care. All higher education, including that in medicine, was discontinued for over a decade. The degradation of the nursing education system to a secondary level of education had occurred even earlier, after the establishment of New China in 1949, and it took 30 years to restore it to a higher level.

The most frequent concerns expressed in literature for

nursing in China, therefore, was the lack of leadership due to the 30-year gap in higher nursing education. These concerns were about the way that nursing was taught and practiced from a medical perspective (Chen, 1998; Hoh, 1999; Piao et al., 2000). This phenomenon was assumed to be related to the fact that nursing education has been carried out largely by medical personnel due to the lack of nursing personnel qualified for colleges and university faculty positions. A similar situation existed in most Asian countries up until the end of the 1960s, and some countries are still experiencing these changes. Educational systems, however, do not exist in a void, and need to be understood within their social context, so it is necessary to personally visit a site and see and experience it directly in order to understand the situation more fully.

A study tour to China was planned from March 21 to 27, 2001 to confirm the accuracy of our information, and to bridge gaps in our knowledge about health care from the era of the barefoot doctors to the present. In particular, we were interested in studying changes in nursing education and the pattern of utilization of nursing personnel in the national health system.

Visits were made to two medical centers in Shandong Province, Taisan Medical Center and Shandong Provincial Qianfoshan Hospital, and to the School of Nursing, Peking Union Medical College.

2. The Social Environment

The general impression we received from our visit to China was that the country's economy is booming with ambitious renovations going on in every aspect of society. Huge scale construction projects were occurring everywhere and people looked healthy and proud of advances in their society. The government's desire for accelerated change seemed to be well communicated, accepted, and carried out throughout the country. We felt there was sincere trust among the people of China in their government, and the power and influence of the government were vividly reflected in the attitudes and positive outlooks expressed in conversations with local scholars. Changes occurring in society and their effect on health and the health care system in the country are summarized in the following section:

(1) The Effect of Economic and Social Changes on the Health Status of the Population

It has been well documented that the earlier focus on preventing infectious diseases and extending health care services in rural communities by utilizing a new cadre of health care workers resulted in a remarkable reduction in the prevalence of communicable diseases and parasitism in China. Recent reports also show an increasing longevity of the population together with changing disease patterns due to changes in lifestyle related to recent economic development and advancement in living conditions. However, the increasing gap between urban cities and rural communities in economic and environmental conditions has been identified once again as an issue in the balanced development of health care in China.

According to the Annual Report of the Ministry of Health for 1996 (Gao et al., 1999), the figures for the leading causes of death in urban areas in China were more or less similar to those in advanced countries, except for diseases of the digestive system, which ranked 6th in China. The same figures show a quite different picture for the rural population in China, indicating in part an increase in lifestyle linked chronic health conditions, but for the major part, acute and chronic infectious conditions remain high in rank.

(2) Changes in Social Policy and their Implications on the Health Care System

- i) The "One Child Policy" of the last 20 years has had a great effect on reducing the birth rate and probably also on the economic development of the country. However, the traditional role of the family in the care of its vulnerable members is expected to change due to changes in the family structure. Therefore, there is an emerging need for societal innovation in support to supplement or replace family functions, especially for the elderly population. With the advancing longevity of the population, young couple nowadays could reasonably expect someday to have the responsibility for supporting 8-12 elderly parents and grandparents (Piao et al., 2000).
- ii) The introduction of a "Free Market Policy" has also caused high levels of competition among hospitals in introducing high technology and innovative approaches to the care of patients, resulting in a remarkable escalation in health care costs, and furthering the gap between urban and rural communities in health care services. A recent disinterest in and reduction of

the former rural cooperative health care system is further aggravating the situation in these areas. The government's rules and guidelines for the development of a competitive yet controlled and balanced health care system are faced with a greater challenge in attempting to achieve a system of health care that is efficient and equitable and fits uniquely to the situation in China.

iii) Policy Innovation in Management and the Credential System for Hospitals

The Chinese health care system is principally a hospital centered, three-tiered system, with public health network support at the primary care level. At each level, hospitals are divided further into three grade levels according to the quality of their services. The government decides the grade level of each hospital according to its roles and functions, size, level of technology, and quality of medical services. Once fixed, however, hospitals can rise to a higher grade within the tier by improving the quality of their services. Although all but a few hospitals in China are government owned, autonomy in running an institute is sanctioned, but responsibility is strictly assessed according to the rules and regulations governing the management of hospitals through regular evaluation of the quality of services, and personnel and budgetary management. Personnel policy requires equal pay for equal labor contributions across the board, meaning that the same salary is given to physicians, nurses and/or college professors who are at the same rank and have an equivalent level of education, regardless of the positions they hold (Chang et al., 1998).

iv) Nursing Law, Personnel Policies and Nursing Practice

In 1977, The Chinese Ministry of Health promulgated a policy to strengthen the quality of nursing services in the country. Under this policy, nursing sections for the administration and formulation of policies concerning nursing were established in each provincial government. In 1979, a nursing personnel policy system for career promotion was established. There were five levels of hierarchical positions for nursing across the board, each with specified qualifications and processes for fulfilling the requirements for promotion to each position. Level five is equivalent to the rank of college professor, level four to associate professor, and level three to instructor. The evaluation criteria for promotion include education, years of service, achievements made

in service and research, evaluation by peers and tests of professional competencies and foreign language ability. Nursing personnel who have achieved the fifth level are still rare in the country.

In 1993, a Nursing Law that included a nursing licensure system and a continuing education system was formulated in order to upgrade nursing quality, and to upgrade the salaries and social status of nurses. The field of medicine, on the other hand, still has no licensure system in China. Currently, nursing is practiced exclusively in hospital settings, but even then the total number of nursing personnel is less than the total number of physicians in the country. A shortage of nurses was thus claimed, and as an incentive to draw more into the profession, nursing salaries were set 10% higher than those of other personnel at the same rank. By 1995, "Team Primary Nursing" was introduced in major hospitals in an effort to improve the quality of nursing care, and tasks were assigned according to the level of the nurse's qualifications.

3. Nursing Education in Transition: Problems and Issues

Based on the previous discussion of social context and the history of nursing education, issues and problems in nursing and nursing education are delineated as follows:

(1) History in Brief

The roots of nursing education in China share many common characteristics with those of other Asian countries such as Japan and Korea. The introduction of professional education in nursing based on western sciences was made mainly through Christian missions to the Oriental countries by the Euro-American world in the late 1880s.

China had the earliest start in baccalaureate level education in nursing when the School of Nursing, Peking Union Medical College was established as early as 1920, and offered a five-year baccalaureate nursing program, the first such level of education in Asia.

However, with the tides of changing politics in the early 1950s, all higher education programs were replaced by secondary level programs: a three-year nursing education program beyond the nine years of public education. This secondary level education for nurses still remains as the major mode of nursing education, with some recent modification adding another year to these programs. The system was

Table 1. Nursing Programs in China

Type of Program / Year	1983	1998	2000
Secondary	523	530	530
Associate Degree	30	31	99
Bachelor's Degree	11	18	42
Master's Degree	0	7	7

(Source; Shen et al., 2001)

taken from the Russian model with the rationale that health care personnel were in short supply, and a higher education was unnecessary for personnel to take care of the illnesses of thousands of millions of people (Basch, 1999; Hoh, 1999).

Upon the change of national policy towards an open market system, a reopening of colleges and universities began, with the national college entrance examination as a starting signal in 1977. By 1983, higher education programs for nursing, including baccalaureate and junior college programs, had started to be reestablished.

(2) Current Status of Nursing Education

Currently the movement towards higher education in nursing is increasing at an accelerated speed. In 1998, there were 31 Associate Degree programs and 18 Baccalaureate Degree programs, but by the year 2000, Associate Degree Nursing programs had increased to 99, and Baccalaureate programs of nursing to 42, whereas, secondary level nursing programs remained the same at 530 in both years. Of these, seven institutions also offered Masters Degree graduate programs in nursing (Table 1). There was also a strong push towards discontinuation of secondary level nursing education, and we heard on our visit to the School of Nurs-

ing, PUMC, that in the Peking area at least, all secondary level nursing education had come to closure with only the last classes remaining in those programs. So in the future, it is expected that nursing education in China will consist solely of Associate Degree programs and Baccalaureate programs, with continuing career development programs attached to them.

Presently in China, all national medical schools in provincial capital cities offer Baccalaureate Degree nursing programs and Associate Degree programs in nursing. In addition to their generic programs, they also offer Adult Continuing Education Programs leading to an Associate Degree or Bachelor's Degrees in nursing. Entry to these continuing education programs is controlled by subscribed norms and processes. Years of experience, performance evaluation, tests of foreign language ability, and the college entrance examination are requirements and requisite processes for applying to an higher education program.

Thus, though an advanced level of nursing education has just started booming, the potential for fast advancement of nursing in China seems great from the view of the ambitious systematic integration of a career ladder throughout the higher education system. With the provision of opportunities for self-enhancement on one hand, and the graded system of promotion policies with age limits for administrative positions on the other, Chinese nursing would seem to be able to overcome concerns about a leadership gap in the very near future.

(3) The Higher Education System and Nursing Curricula

Table 2. Curricula Structure of 10 Collegiate Programs in Nursing

General Education (29.1%)	Basic Sciences (37.0%)	Nursing Major (33.9%)
Politics	Biology	Fundamental Nursing
Physical Education	Anatomy	Emergency Nursing
Foreign Language	Embryology	Rehabilitaion Nursing
Mathematics	Physiology	Medical Nursing
Physics	Microbiology	Surgical Nursing
Chemistry	Pathology	Obstetric & Gynecologic Nursing
Computer	Pharmacology	Pediatric Nursing
	Pathological Anatomy	Psychiatric Nursing
	Parasitology	E.E.N.T. Nursing
	Chinese Medicine	Communicable Disease Nursing
	Diagnostics	Dermatology Nursing
	Radiologic Diagnosis	Nursing Management
	Public Health	Medical Ethics
	Nutrition	Education
	Biostatistics	Medical Psychology

(Source; Hoh, 1999)

Issues

The Chinese higher education system is structured according to disciplinary distinctions. All health care personnel are educated on parallel tracks for each separate role category even if all programs are under the same roof of a medical school. All national medical colleges have programs of Chinese medicine, public health, and nursing, in addition to medicine. All collegiate programs except one are five years in length, each preparing clinical doctors, doctors of Chinese medicine, public health doctors and nurses, respectively.

In the division of public health, three-year junior college level programs are also offered for the preparation of public health workers, laboratory technicians, and x-ray technicians. The role of the public health worker seems similar to that of public health nurses in Japan, but limited in scope to clinical work in Health Stations and/or Maternal and Child Health Stations (Cho, 1998).

The fact that educational systems for health care personnel are distinctively separate for each role category and that the location of nursing is limited predominantly to hospital settings, seem to have relevance to the structure of nursing curricula, beside the fact that nursing education is controlled by medicine. The curriculum structure of the 10

Baccalaureate programs in China, shown in table 2, seems to exemplify this relationship. Even though there were subjects such as public health and health statistics in basic sciences courses, there were no public health/community nursing subjects or related subjects in nursing major courses to foster the capacity for community field work. This may signify the fact that the area of public health comes under the prerogative of separate personnel categories.

Divisions in major nursing courses depict the medical clinical division model, except for a few subjects such as fundamental nursing, nursing management, and education. In addition, there were the subjects of medical ethics and medical psychology in major courses of instruction. Thus, at first glance, the curriculum seems hardly distinguishable from medical science education. Peculiar to Chinese nursing curricula was the inclusion of Chinese medicine and politics as subjects of instruction. From this curriculum structure, one can see the overruling influence of medicine on nursing education.

(4) Transition from a Medical Model to a Nursing Model

In contrast to traditional Chinese Baccalaureate nursing programs, the School of Nursing, Peking Union Medical College, the first ranking medical school in China, has recently renovated its curriculum from the traditional 5-year

Table 3. PUMC's Baccalaureate Degree Nursing Program

General Education (Humanity Science)	Basic Nursing Sciences	Nursing Sciences
English (4 courses)	Health Care Delivery System	Fundamentals of Nursing I II
Psychology	Human Biology I II III	Health Assessment
Communication I II	Growth and Development	Nursing Therapeutics Related to Social Interaction
Cultural Anthropology and Philosophy	Nutrition	Nursing Therapeutics Related to Reproduction
Inquiry and Logical Reasoning	Pharmacotherapeutics	Human Environment Interaction
Bioethics and Professional Regulation	Traditional Chinese Medicine	Nursing Therapeutics Related to Oxygenation
Politics (1 credit 6 semesters)	Biochemistry	Nursing Therapeutics Related to Nutrition- Elimination
Physical Education (1 credit 4 semesters)	Informatics	Nursing Therapeutics Related to Activity- Rest
	Data Management	Nursing Therapeutics Related to Cognition- Perception
		Problem Solving Skills and Strategies
		Nursing Management and Leadership
		Nursing Education
		Teaching Practicum
		Clinical Nursing Project I II
		Community Health Nursing
		Professional Development
		Comprehensive Clinical Practice

(Source; Bulletin PUMC, 2001)

medical model structure into a 4-year program with a human based nursing model curriculum (Table 3). Major changes in the curriculum are seen in the broadening of the perspective of nursing by expanding the field of study in the foundation courses into inquiries in the philosophical, psycho-sociocultural and environmental sciences and their interaction with human phenomena, beside the medical theories of disease generation.

Another major change is in nursing major courses. Instead of medical clinical divisions, courses were divided according to the pattern of nursing diagnoses categories, such as Nursing Therapeutics Related to Social Interaction, Reproduction, Oxygenation, Nutrition-Elimination, Activity-Rest, and Cognition-Perception. Also included are Health Care Delivery System, Community Health Nursing, Professional Development, and instrumental subjects such as Communication, Health Assessment, Data Management, Problem Solving, Nursing Management and Leadership, and Nursing Education. Clinical Nursing Project I-II is followed by Comprehensive Clinical Practice. Additionally, a one-year postgraduate internship in a hospital is required before taking the national examination for nursing licensure.

Since experimentation with this new program has been supported by the Ministry of Health and initiated with the support of the China Medical Board of New York from 1996, this curriculum model would shortly seem to get nationwide attention and set a model for future Baccalaureate Nursing Education in China. Though promising, however, this new program has been designed and taught uniquely by nurse-faculty members influenced by the western world, so the situation in general dictates that adoption of this model for nursing education in China may take more time than would have been expected.

4. Prospective Issues in Chinese Nursing Education

(1) Discrepancy between Needs and Preparation of Health Personnel

As China is moving rapidly towards an aging society, traditional norms and the concept of hospital-centered care are not expected to meet the health care needs of the population nor fit the technical and capital resources available. The current division in education and the utilization of health personnel between curative services and preventive health care services respectively by clinical doctors, nurses, pub-

lic health doctors and public health workers may have worked out from the views of the labor division and apparent needs for disease prevention.

However, with the increasing complexity of health care needs, the current pattern of education and utilization of health personnel would not seem to support emergent societal needs. Increasing chronic health problems related to aging and societal changes, together with the decreasing capacity of families as basic caregivers, will produce a demand for more comprehensive and integrated health care services. In such an event, the Chinese health and welfare sector would be faced with the challenge of developing more effective and feasible strategies for the resolution of these emergent problems

(2) Challenge for Nursing Education in Perspective

In view of these prospective changes, nursing education should be prepared to meet the challenges forthcoming from emergent polarization of care needs through the adoption of high technology in modern hospitals and the community, and in home-based health care. In reviewing the current public health network system, which functions through public health stations, maternal and child health stations, and port of entry surveillance and food surveillance, it seems that the focus is on mass prevention of communicable diseases and hardly on health promotion measures. Completely missing in this public health network is the care component, which modern society would require, and where nurses could best be prepared to fill in the gaps most effectively.

With this perspective in mind, future nursing curricula should be structured not only to adapt to the comprehensive care needs of hospitalized patients, but also to the needs of individuals, groups and communities for supportive care, by empowering and enhancing efforts in health promotion and raising quality of life. Communication skills, human relation skills, effective decision-making and problem-solving, and organizational management for community and mass-based nursing competencies will need to be fostered as well as clinical nursing competencies. Community-based preventive psychiatry and mental health, maternal and child health, including care for healthy child bearing and child rearing practices, mass health screening, community assessment and planning for community health programs all need to be planned as an integral part of nursing curricula, with

field practicum to follow theory sessions.

(3) On International Cooperation

For future international cooperation in nursing between China and Japan, focusing on community health nursing in exchange programs would seem to make the best contribution for the advancement of nursing in China. Such programs, with the emergent health care needs and characteristics of society as a background, would serve to develop a new community-based nursing role with nurses as health promotional care planners as well as care providers for a defined community. Such a role would include knowledge of the development of community health structures, policies, programs and facilities, and the roles of nurses in community health. It would seem to serve best for the advancement of nursing and nursing education in China beyond the boundaries of the hospital into the community, and to better serve for the health of the total population and for the attainment of better visibility and recognition by society as a whole.

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Author for correspondence

Department of International Nursing
Oita University of Nursing and Health Sciences
2944-9, Megusuno, Notsuharu, Oita 870-1201, Japan
Yeo-Shin Hong
hong@oita-nhs.ac.jp