

**Nursing Education Curriculum in the People's
Republic of China and the United States: A Comparative Perspective**

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Abstract

This paper examines the standard three-year secondary nursing education curriculum in China and compares it with a 21-month generic associate degree nursing curriculum in the United States in terms of course offerings, time allocation, and clinical experience. Content analysis and interview are the primary methods of inquiry. Content analysis of the two nursing education curricula is conducted with descriptive statistical analyses. Interviews (N = 6) with nursing faculty and administrators from four secondary nursing programs in Henan Province, China were conducted in 1998. Differences between the two curricula are found with regard to the types of courses offered and time allocation to various course categories. Although little discrepancy is uncovered from the comparison of nursing courses at first look, a closer examination reveals otherwise. The most striking difference of the two curricula lies in the arrangement and staffing pattern of clinical instruction. The study also finds that the medical profession has profound influence on nursing education curriculum in China, and the uniqueness of the Chinese curriculum is the integration of traditional Chinese medicine into the nursing curriculum.

Nursing Education Curriculum in the People's Republic of China and the United States: A Comparative Perspective

Curriculum is at the core of nursing education. Curriculum development, implementation, and revision are dictated by the philosophy and goals of a nursing program, the developmental level of the targeted student body, and the societal constraints at large. This paper examines the standard three-year secondary nursing education curriculum in China and compares it with a 21-month generic associate degree nursing curriculum in the United States in terms of course offerings, time allocation, and clinical experience.

Overview of Nursing Education System in China

China has a multi-tier nursing education system. There are several avenues leading to the title of registered nurse: secondary nursing programs, zhuanke programs, and baccalaureate programs. Secondary nursing programs are the backbone of the system, and 99% of the 1.2 million nurses in China have obtained their training from these programs (Chan & Wong, 1999). In 1998, there were about 530 secondary nursing programs around the country (Chang, 1999). An estimate of 40,000 nurses graduate from these programs annually (Chiu & Lee, 1996).

Post-secondary nursing programs are designated at three levels: zhuanke, baccalaureate, and graduate. Zhuanke programs have a three-year curriculum and have two variations. One track enrolls high school graduates and is part of the traditional nursing education system. The other is part of the non-traditional education system and is designed as a mobility track for working nurses. Most baccalaureate nursing programs have a five-year curriculum and admit high school graduates through highly competitive National University Admission Examinations. Graduate nursing programs at the master's level are three years in length and enroll baccalaureate nursing graduates through national examinations developed by each individual

program. By 1998, there were 18 baccalaureate programs and five master's programs in nursing across the country (Chang, 1999). The first doctoral program in nursing is being built at Sun Yat-Sen University of Medical Sciences. The first group of doctoral students is scheduled to start their classes in 2000 (Sun Yat-Sen University of Medical Sciences, 1999). In addition to the traditional programs above, there are various forms of non-traditional nursing programs at the zhuanke and baccalaureate levels such as television and distance education programs, "examination-through-self-study" programs, and programs at local continuing education institutions. Together, they provide avenues to working nurses for career advancement. Table 1 provides a comparison of the nursing education systems in the two countries.

INSERT Table 1. Comparison of Nursing Education System in China and the United States

Literature Re view

There are no studies that focus on Chinese nursing education curriculum in current English databases. Chan & Wong (1999) and Wong, Chan, & Yeung (2000) are the only published studies pertinent to this research. Moreover, there are no research-based studies on nursing education curriculum between 1991 and 1998 in the Chinese Journal of Nursing, official publication of the Chinese Nursing Association (CNA) and the most authoritative and scholarly Chinese journal in the field.

From a comparative perspective, Chan & Wong (1999) identified issues in nursing education in Mainland China and Hong Kong. It highlighted the need to change nursing education curriculum in Mainland China from the illness-focused curriculum to a health-based one and from the focus on acute care to primary care. Chan & Wong (1999) concluded that the

integration of traditional Chinese medicine (TCM) into the curriculum is one of the features of the nursing education in Mainland China. However, the study is largely based on secondary data submitted for the First China-Hong Kong Nursing Education Conference in 1996. The second study (Wong, Chan, & Yeung, 2000) is closely related to two of the authors' earlier study, and is an in-depth content analysis of the abstracts submitted for the same conference in an effort to identify the trends of nursing education in China. In addition to the findings uncovered in the earlier study, their data suggest that the focus in nursing education in Mainland China is prepare the so-called "pragmatic" nurse. While majority of the 345 submitted and analyzed abstracts address issues in instruction only few deal with "student-centered approach to learning, advanced practice, and the evaluation of educational processes and outcomes."

Methodology

Content analysis and interview are the primary methods of inquiry for this study. Content analysis of the standard three-year secondary nursing education curriculum in China and a 21-month generic associate degree nursing curriculum in the United was conducted with descriptive statistical analyses. Course descriptions and sequencing were also examined. Interviews (N = 6) with nursing faculty and administrators from four secondary nursing programs in Henan Province, China were conducted in Chinese with consent and then transcribed into English verbatim. The interviews were semi-structured with open-ended questions focusing on various aspects of the Chinese nursing curriculum and nursing education. The purpose of employing the interview method is to provide another source for data collection. More importantly, it was employed to generate contextual information for interpreting the quantitative data from content analysis as well as to validate it.

The standard three-year curriculum for secondary nursing programs issued by the

Chinese Ministry of Health in 1994 was used for comparison with a 21-month generic associate nursing curriculum at a community college along the Gulf Coast in the United States. Two methodological issues need to be addressed--comparability and representativeness. First, the choice of an associate degree program for comparison is based on the assumption that it is closest to the school-based Chinese secondary nursing program in the way it operates. Further, it is hypothesized that the Chinese curriculum is comparable to its U.S. counterpart, despite of the fact that the three-year Chinese curriculum is designed for junior high school graduates. This assumption is based on the content level of the overall general secondary education in China and the additional general education course work Chinese students in secondary nursing programs are required to complete. The assumption of comparability holds true especially with nursing courses since students in neither curriculum have previous exposure to nursing.

Since there is no standard nursing education curriculum under the decentralized educational system in the United States, the researcher had to choose the curriculum of an accredited U.S. associate degree nursing curriculum for comparison with the centralized Chinese curriculum. The presumption is that this National League for Nursing accredited program has reflected the core requirements of generic associate degree nursing programs in the United States. Nevertheless, the limitations of this study are its small sample size and the representativeness of the selected generic associate degree nursing curriculum.

Findings and Analyses

Course Offerings and Time Allocation

General education courses. Table 2 demonstrates major differences in the types of courses required. The Chinese curriculum devotes almost 5% more time to general education. Because the admission requirement into the Chinese program is completion of junior high

school, it is logical that more courses on general education are offered in the Chinese curriculum as the continuation of high school education. The general education requirements in the U.S. program reflect the emphasis on the acquisition of basic knowledge and skills, and to some extent, the American liberal arts education philosophy and tradition.

Professional foundation courses. Almost a 4% difference is found in terms of time allocated to professional foundation courses. In addition, major discrepancies exist as to the total number of courses and types of courses offered. While the U.S. program requires only three professional foundation courses, the Chinese curriculum doubles the number (Appendice A and B). The emphasis of the Chinese curriculum on this cluster of courses supports the finding that nursing education curriculum in China is modeled upon the medical education curriculum that focuses on the pathology and etiology of the disease processes (Chan & Wong, 1999).

Nursing courses. Both curricula devote about one third of total program time to nursing courses. However, a closer examination of the Chinese curriculum reveals two of the ten courses, i.e. Traditional Chinese Medicine & Acupuncture, and Preventive Medicine, are not directly related to nursing per se. In other words, the U.S. program actually devotes about 5.6% more time to this course category. There are a few plausible explanations. The American nursing textbooks are much more comprehensive with in-depth coverage from anatomy and physiology of disease processes to related nursing care. Consequently, more time needs to be allocated for the course content. More importantly, the U.S. curriculum is designed by nurses with more emphasis on nursing care rather than on medical treatment.

The Chinese curriculum breaks nursing into specialty areas exactly as in the medical education curriculum. Such an arrangement further suggests the influence of medical education on nursing curriculum. Internal Nursing, Surgical Nursing, and Foundations of Nursing make up

55% of the total nursing course time. It is evident that the major deficit in the Chinese curriculum is the absence of mental health nursing. Such omission is not merely an accident, but an indicator of mental health nursing's low priority in the curriculum, which is a reflection of the societal attitude towards the mentally ill (Interview with Shilan Wang on May 6, 1998).

In contrast, the U.S. curriculum integrates internal nursing and surgical nursing into Adult Nursing, and the obstetric & gynecologic nursing and pediatric nursing into Maternal/Child Health Nursing. There are no separate courses on nursing of clients with infectious diseases, or with conditions of the ear, nose, throat, eye, and mouth. The content of those areas is included in Adult Nursing and/or Maternal Child Health Nursing. There is no specific course to address community/public health nursing in this U.S. associate degree curriculum although its content is included in Adult Nursing to some extent, and limited clinical exposure is provided accordingly in the last quarter of the program.

Except for Foundations of Nursing, almost all of the specialty nursing courses in the Chinese curriculum are taught by physicians who have expertise in a given area of study (Interview with Shuhao Xue on April 7, 1998). This is a unique situation that deserves further explanation. Due to 30-year abolition of nursing from academia between 1953-83, there is a “generation gap” in the pool of nursing faculty with adequate qualifications to teach these specialty areas. Even with the flourishing of baccalaureate nursing programs and graduate programs in recent years, shortage of qualified faculty is still a serious challenge facing Chinese nursing education, especially at the post-secondary level. This situation is further exacerbated by a considerable “brain drain” of baccalaureate nursing graduates into the medical profession each year (Xu, Xu & Zhang, 2000).

In contrast, the U.S. nursing curriculum is dictated by the goals and requirements of state

nursing acts and board of nursing policies. All of the nursing courses in the U.S. program are organized around the nursing profession and taught by nursing faculty at the college. A Master of Science in Nursing is the minimal educational requirement to teach nursing.

A uniqueness of the Chinese curriculum is the integration of the course Traditional Chinese Medicine and Acupuncture into the curriculum, although the allocated time is only 5.5% of the total nursing course hours. This is an introductory course on the fundamental principles of TCM along with the nursing knowledge and techniques consistent with these principles, including acupuncture, dietary therapy, and psychosocial skills. The goal is to acquaint students with the holistic view and the dialectic guiding principle in the assessment, diagnosis, and treatment of patients. Moreover, graduates are expected to apply the principles, knowledge, and skills of TCM to patient care in their professional nursing practice upon graduation.

The course “Issues in Nursing” in the U.S. curriculum addresses the important issues in the nursing profession today such as the rights and responsibilities of the nurse, ethical and legal issues in nursing, political involvement, leadership, professional roles, collective bargaining, health care policy and economics, to name but a few. This course aids nursing students in obtaining a broad perspective of the real nursing world. Its equivalent is not found in the Chinese curriculum.

The presence of Western, United States in particular, nursing theory and practice is becoming increasingly visible in the curriculum, especially with international scholarly exchanges in recent years. For example, concepts such as the nursing process, nursing diagnosis, and modes of nursing delivery have been integrated into the latest nursing textbooks. In addition, theories from such prominent nurse theorists as Henderson, Orem, Peplau, Rogers, and King have been introduced. However, some Chinese nurse educators remain skeptical about the

applicability of Western nursing theories, models, and practice modes because the infrastructure, personnel, and management systems inherently required by the Western models may not be readily available in the Chinese environment. The concept of applicability also includes cultural relevance. The wholesale attitude towards Western nursing without critical discrimination, which will likely prove to be unworkable, even harmful and disastrous, need to be guarded against.

Electives. The Chinese curriculum designates only 2.5% of total program time to electives while the U.S. program devotes 7.2%. The relative emphasis on electives in the U.S. program echoes American tradition of respect for individual choices, which is derived from the fundamental belief in personal freedom. Further, such practice evidences the philosophy in laying a broad knowledge foundation for students of higher learning.

INSERT Table 2. Comparison of Time Allocation in Chinese and U.S. Nursing Education Curricula by Course Category [HERE](#)

Clinical Instruction and Experience

Clinical teaching and learning are an integral part of nursing education since much of the nursing knowledge and many of the nursing skills can only be learned, improved, and mastered through clinical exposure. Moreover, clinical learning provides a critical experience to transform a student nurse into a professional nurse. There is a 26-week concentrated practicum in the last academic year of the Chinese curriculum. Otherwise, there are few clinical opportunities beyond learning labs during the first two years except for scattered clinical exposure totaling no more than four weeks.

There is no school-based clinical faculty in secondary nursing programs. In most cases, clinical preceptors serve as clinical instructors. They are selected by specific nursing units from

nurses with at least three-year experiences, appointed by the nursing administration, and then assigned to a nursing student. As a result, there is little input into the clinical experience and evaluation on the part of a nursing program in terms of the clinical experience of nursing students. Occasionally, on-site visits and check-ups are undertaken on the part of the nursing program. In most cases, these visits are carried out by nursing administrators who do not possess the needed professional knowledge to evaluate students' clinical performance. Lack of communication between a nursing program and a clinical facility is not uncommon, and therefore, there is little quality control over the clinical teaching and learning (Interview with Shilan Wang on May 6, 1998). Under such clinical arrangements, clinical experiences are likely to be compromised due to lack of formal educational requirement for a preceptor. In some cases, clinical learning suffers because the preceptor has a heavy caseload of patients. The practice of preceptors using nursing students merely as "extra hands" is not uncommon (Huo, 1998).

In contrast, the U.S. program introduces the clinical experience into the curriculum once a student enters into the professional component of the curriculum. Such parallel arrangement of didactic instruction (theory) and hands-on experience (practice) appears more conducive to learning. Such clinical arrangement also helps nursing students to understand their future work settings and the expectations of them early in the program. In essence, clinical experience is the most effective way to socialize nursing students into the profession, and to facilitate them to make an early and informed decision as to whether nursing is the correct career choice.

The U.S. program has its own clinical faculty. The advantages of such a staffing pattern for clinical teaching are three-fold: (a) It helps to ease the anxiety level of nursing students in the clinical setting since students have already established a rapport with the clinical instructors at school; (b) The clinical instructors can readily ask students to apply certain nursing knowledge

and skill already acquired in class as appropriate situations arise to assess learning outcomes; and

(c) The clinical instructors can better evaluate students' clinical performance and obtain timely feedback to make their clinical instruction more effective and efficient.

Discussion and Conclusion

Historically, the philosophy and the model of medical education have influenced nursing education. The “paradigm shift” in medicine triggered by Engel (1977) from the biomedical model to the proposed biopsychosocial model has generated significant derivative effects on medical education as well as on nursing education. While the U.S. curriculum has mirrored such impact since the 1970s, the Chinese curriculum is currently under reform to reflect this fundamental change.

Chinese nurse educators have perceived that the greatest deficit of the nursing education curriculum in China is the minimal presence of the humanities and social sciences. Another criticism is its focus on vocational/technical education, especially at the secondary level (Yuen & Jin, 1995). The situation has changed considerably in the past few years with the addition and integration of more courses in the humanities and social sciences into the curriculum both as required and elective courses. For example, the three-year nursing program at the Health School of Henan Medical University added the following courses to its curriculum: Public Relations, Nursing Aesthetics, Medical Ethics, Nursing of Patients with Dermatologic Conditions and Sexual Transmitted Diseases, Emergency Nursing, Psychiatric Nursing, Rehabilitation Medicine, and Nutritional Science (Health School of Henan Medical University, 1998). Nevertheless, the Chinese nursing curriculum is still perceived predominantly as “physiologically based and disease-oriented” (Chan & Wong, 1999). Still another criticism is the separation of theory from practice because what is taught in class considerably lags behind the nursing practice. For

instance, some of the nursing equipment and procedures included in the current textbooks have already become obsolete in the real world (Interview with Yunju Shi on May 6, 1998).

Medical education has had a tremendous impact on nursing education in China from curriculum to faculty training. This is true with secondary nursing education, and more so with post-secondary nursing programs. Accelerating the process to prepare more qualified faculty with bachelor and/or advanced degrees in nursing remains one of the urgent challenges in the strategic planning of nursing education in China. Until then, nursing education in China has to continue to depend on medical faculty.

Issues related to clinical teaching and learning demand serious attention. The question that whether it is more beneficial to arrange clinical learning experiences in a concentrated manner or spread them throughout the entire span of the program is still open to debate among nurse educators. The same is true with hospital-based preceptor model versus school-based clinical instructor model. In 1992, CNA organized a national conference on clinical teaching in an effort to promote and improve the hospital-based preceptor model. The conference reached the consensus that the model of selection, appointment, training, placement, and retraining be promoted and become the national standard.

Theoretically, it appears that the American model of clinical arrangement throughout the entire nursing program is more effective and efficient because it provides an immediate feedback mechanism that fuel up motivation. Research is needed to compare the two modes of clinical instruction with regard to learning outcomes. According to Chinese nurse educators, the concentrated format is more for the convenience of the clinical facility rather than for the learning experience of nursing students. To a considerable extent, clinical arrangement is dictated by the facility since secondary nursing schools do not own any clinical sites. There is a

growing difficulty in finding clinical facilities in the increasingly market-driven healthcare industry in China (Interview with Shilan Wang on May 6, 1998).

To include TCM is characteristic of the Chinese nursing curriculum. This practice stems from the long-standing policy of the Chinese government to integrate TCM with Western medicine. TCM, including its philosophy (e.g., the holistic view, the dialectical treatment strategy, and its emphasis on prevention) and techniques (acupuncture and Chi Gong, etc.), has much to offer to Western medicine as well as Western nursing, especially in the treatment of common and chronic illnesses. The popular saying that “nursing contributes seventy percent and medicine thirty percent to the recovery from an illness” echoes the Chinese belief.

The world has entered the age of globalization. With 1.2 million nurses and one of the largest nursing education systems in the world, China holds a pivotal role in developing a global perspective of nursing education, and hence the nursing profession in general. The present study intends to stimulate the interest to utilize the comparative approach to research on nursing education at cross-national levels. Such research will contribute not only to the knowledge base of nursing as a discipline, but also to the mobility of nurses across national borders through setting standards of international credentialing in nursing. On the practical level, comparative studies will also pave the way for credit transfer, development of international exchange programs, and ultimately, lay the foundation for an international license for nurses.

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Table 1. Comparison of Nursing Education System in China and the United States

<u>Type of Program</u>	<u>China (Years)</u>	<u>U.S. (Years)</u>
Secondary programs	2-4	
Post-secondary programs		
<u>Zhuanke/Associate</u>	3	2
Baccalaureate	5	4
Master	3	1-3
Doctoral	3+2*	3+

Note. *The first doctoral program in nursing was established at Sun Yat-Sen University of Medical Sciences with a proposed 3+2 format (3-year course work and 2-year dissertation).

Table 2. Chinese and U.S. Nursing Education Curricula: Comparison of Time Allocation by Course Category

<u>Course Category</u>	<u>Chinese</u> % of curriculum	<u>U.S.</u> % of curriculum
General education	23.81	18.12
Professional foundation	14.71	10.87
Nursing	31.92	33.33
Practicum	27.08	30.43
Electives	2.48	7.25

Note. Compiled from Teaching Plan and Guidelines for Nursing Major at Secondary Health Schools, Ministry of Health, People's Republic of China, 1994, p. 1-4, and 1996-98 Catalog of the concerned U.S. community college along the southeast Gulf Coast.

Appendix A: Three-Year Standard Curriculum for Nursing Major at Secondary Health School in China

<u>Course Category</u>	<u>Hours</u>	<u>% of Curriculum Time</u>
General Education	777	23.81
Politics/Ideology	142	4.35
Physical Education	142	4.35
Chinese	125	3.83
English	125	3.83
Mathematics	45	1.38
Physics	63	1.93
Chemistry	90	2.76
Biology	45	1.38
Professional Foundation	480	14.71
Anatomy & Embryology	123	3.77
Physiology	76	2.33
Biochemistry	52	1.59
Immunology & Aetiological Biology	76	2.33
Pathology	68	2.08
Pharmacology	85	2.60
Nursing	1042	31.92
Nursing Psychology	38	1.16
Traditional Chinese Medicine & Acupuncture	57	1.75
Foundations of Nursing	180	5.51
Internal Nursing	211	6.46
Surgical Nursing	189	5.79
Obstetric & Gynecologic Nursing	97	2.97
Pediatric Nursing	80	2.45
Infectious Disease Nursing	60	1.84
Ear, Nose, Throat, Eye & Mouth Nursing	50	1.53
Preventive Medicine	80	2.45
Practicum	884	27.08
Electives	81	2.48
TOTAL CURRICULUM HOURS	3264	100

Source: Adapted from *Teaching Plan and Guidelines of Nursing Major at Secondary Health Schools*, Beijing: Ministry of Health, People's Republic of China, 1994.

Note. The academic year consists of two 18-week semesters. The third semester has a two-week clinical exposure (Foundations of Nursing, 40 hours; and Internal Nursing, 16 hours); the fourth semester has two-week clinical experience (Internal Nursing, 16 hours; Surgical Nursing, 10 hours; Obstetrical & Gynecologic Nursing, 10 hours; and Pediatric Nursing, 8 hours); and the sixth semester includes a two-week community health nursing practicum.

Appendix B: Curriculum of a Generic Associate Nursing Program at a U.S Community College along the Gulf Coast

<u>Course Category</u>	<u>Hours/Week</u>	<u>% of Curriculum Time</u>
General Education	25	18.12
English Composition I*	5	3.62
Elementary Algebra or Higher Math*	5	3.62
Music or Art Appreciation^	5	3.62
Principles of Biology*	5	3.62
Foundations of Speech Communication	5	3.62
Professional Foundation	15	10.87
Human Anatomy & Physiology I	5	3.62
Human Anatomy & Physiology II	5	3.63
General Microbiology	5	3.62
Nursing	46	33.33
Nursing Foundations	3**	2.17
Nursing Fundamentals	3**	2.17
Nursing Concepts	3**	2.17
Principles of Psychiatric/Mental Health Nursing	9**	6.52
Maternal/Child Nursing	9**	6.52
Concepts of Adult Nursing	9**	6.52
Advanced Adult Nursing	9**	6.52
Issues in Nursing	1	0.72
Practicum	42	30.43
Electives	10	7.25
Behavior/Social Science Elective^	5	3.62
Elective^	5	3.62
TOTAL CURRICULUM HOURS	138	100

Source: *Catalog (1996-98)*.

*These 15 credit hours of general education courses must be completed with a "C" or better prior to admission into the nursing program.

^These required general education courses may be taken in any sequence prior to, or concurrent with the nursing courses.

**A clinical component is assigned to these courses, which are not separately listed. The 3- and 9-credit courses are listed as 5- and 11-credit courses in the original catalog. They are broken down into theory credits and clinical credits in order to be compared to the Chinese curriculum. All of these courses carry the equivalent of two credits for clinical experience, which yield six contact hours for each course based on the state-board approved formula that one clinical credit equals to three contact hours. This information was obtained and confirmed on June 9 and 10, 1998, from the assistant director and the director of the associate degree nursing program under study.