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Review

Nursing education in China: Meeting the global demand for quality healthcare



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ARTICLE INFO

Article history:

Received 19 August 2015

Received in revised form

18 November 2015

Accepted 2 February 2016

Available online 8 February 2016

Keywords:

China

Nursing education

Globalisation

Global healthcare

Transcultural nursing

ABSTRACT

With a predicted global nursing shortage, ensuring the provision of quality healthcare has become a pressing concern. In China, these concerns include the need to produce nurses trained to a level to support advancing nursing practice and a healthcare system that supports the growth and retention of nurses in China.

This paper argues that the standard of nursing education in China plays a crucial role in preparing graduates to meet the health demands of China's growing population and the role that China can play into the future in the global progression of nursing. Collaboration between nursing authorities, educators, and legislators is required to support the progression of nursing worldwide.

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Peer review under responsibility of Chinese Nursing Association.

<http://dx.doi.org/10.1016/j.ijnss.2016.02.009>

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1. Introduction

China represents approximately one-fifth of the world's population. It is a nation with an increasing number of older residents and a severe nursing shortage [1,2]. To accommodate the growing demands for quality and accessible healthcare, China is undertaking significant healthcare reforms [3]. The success of these reforms will be influenced by a number of factors including China's social, political and economic development. The capacity of China's nurses to meet increasing healthcare needs and the retention of nurses in the Chinese healthcare system are also both integral to China's healthcare and future development. The evidence suggests that nursing education and scope of practice in China each require development to meet the demands [4,5] and an increasing number of nurses are seeking overseas employment [6–8].

There is scant literature available which focuses on nursing education in China. This paper seeks to contribute to knowledge in this area with a focus on the current status of nursing education in China, the challenges in nursing education; strategies to address those challenges and initiatives to support accessible and high quality healthcare.

2. Background

2.1. Diploma, advanced diploma, and baccalaureate

Nursing education in China comprises three levels: Diploma; Advanced Diploma; and Baccalaureate Degree. The Diploma is offered by schools of health with graduates drawn from junior high schools and enrolment is for a three-year nursing program designed to teach technical skills. The Advanced Diploma is offered by colleges and universities with graduates drawn from high schools and schools of health; enrolment is for a three-year associate nursing program offering general training alongside nursing theory and skills. The Baccalaureate Degree is offered by universities for graduates drawn from high schools and Diploma programs; students enrol in a five-year Bachelor of Nursing program providing a broad nursing foundation with associated sciences. This program equips students to work at an advanced level of nursing in higher ranking hospitals or in management positions [2,9,10].

Since 1992, however, there has been a push for nurses to advance their nursing qualification from Diploma level to Baccalaureate level [11]. The incentive for this is closely linked with career progression and more students now seek a higher level qualification through university-based training. As a consequence, Diploma level training is gradually being

phasing out. Nearly half of all nurses educated in China are now qualified with an Advanced Diploma or above, although there are still some nurses who will qualify with a Diploma [2]. Currently, over 38.8% of practising nurses hold a university Advanced Diploma and 8.9 an undergraduate or graduate qualification [10].

Despite the differences in nursing qualification levels, all nursing graduates are required to pass National Nurse Qualification Examination (NNQE) before they are registered to practice nursing [4,11].

From its inception, nursing education in China adopted the bio-medical model [2]. A study that examined Baccalaureate nursing programs in China revealed that these were a direct replica of the medical training curriculum. The only identifiable differences appeared to be that subject titles were suffixed with the word 'nursing' in place of the word 'medical' [12]. Presently, there is a move away from a curriculum framework with a medical focus to one that draws on a nursing process oriented model [13]. Nursing educators and educational bodies are supportive of this move. In addition to this shift of focus, nursing program design studies are currently in the process of examining the pedagogical model of problem-solving and role-play centred learning to help facilitate the application of theoretical knowledge to clinical nursing practice [4].

2.2. Master programs

In the period 2005–10, there was a five-fold increase in the number of students enrolled in Master of Nursing programs in China. This increase elevated the number of enrolled students to approximately 600 [14]. The Master of Nursing programs facilitate the development of expertise in either clinical practice or in research [15]. However, literature surrounding China's Master of Nursing curriculum development in the years 1991–2011 indicates that the Master of Nursing course does not focus exclusively on professional nursing [16]. Due to the paucity of research informing China's nursing education and practice, the Master of Nursing course instead draws heavily on the medical-focused curriculum and includes other areas of study such as political theory, English language, and statistics [16–19]. This is not the case in Master of Nursing courses in Western countries such as Australia [20].

2.3. Doctoral programs

Doctoral nursing programs in China are a relatively recent phenomenon. However, in the 5 years since the first Doctoral program was instituted in 2003, the number of programs has grown to 22 [21]. The Doctoral nursing programs aim to train nurses in education, research, and management. Currently,

there are two types of Doctoral nursing programs in China: PhD by research and the clinical doctorate.

Students enrolled in doctoral programs are able to focus their research on nursing management, nursing education, clinical practice, a specialised clinical field, community nursing, or mental health nursing [22]. Enrolment in Doctoral programs is challenging for nurses for two reasons: there is a shortage of current nursing-oriented learning resources [23], and a shortage of qualified nursing professionals to supervise postgraduate students [15,24]. Although supervisors may be experts in their own fields, their expertise may not be relevant or transferrable to the field of nursing.

In line with the increasing focus on advanced nursing practice and training in other countries, China's goal is to develop its own specialised and advanced nursing programs. The development of these programs is, however, still in its infancy. As there is a tendency for the interpretation of the definition and role of advanced nursing practice to be generated in China at a local level, there is no singular national definition of what constitutes 'advanced nursing practice'. This lack of unity has led to confusion and heated debate within nursing education [15].

Without an advanced scope of nursing practice, the educational content of Masters and Doctoral nursing programs cannot be mapped against advanced practice competencies and nurses on these programmes cannot be supported to develop advanced practice through clinical placements [15]. As with Diploma, Advanced Diploma and Baccalaureate nursing programs, Master and Doctoral nursing programs draw heavily on the medical curriculum.

3. Challenges and opportunities

Whilst nursing education in China is progressing there are many challenges [4]. These are discussed in the following section.

3.1. Challenges

3.1.1. Standard of nursing education

With the increased focus on nursing education in China, there has been a concomitant rise in the number of undergraduate nursing program providers. Where national standards for pre and post-registration nursing education do not exist, inconsistencies in learning objectives and curricula exist across China [25,26]. As a consequence, the content of courses varies greatly even at a local level amongst schools of nursing [16,18,20], further compounded by a paucity of educational initiatives and evaluation to support university level curriculum development [16].

3.1.2. Professional commitment and motivation to study nursing

Research suggests that not all students enrolled in nursing programs choose nursing as their first option for study and, as a result, their professional commitment towards studying nursing can be tenuous [27]. Prior to sitting the national university entrance exam, students in China must indicate a major field of study on their preference list. If the student's

exam score does not meet the entrance requirement for their selected major, the student risks being allocated another major in an area of little or no interest to them. The consequence of not achieving an appropriate entrance score is that a student with, for example, a first preference for music or art, may find themselves enrolled in a nursing program. Without the necessary motivation to undertake a career in nursing and without the dedication necessary to cope with the demands, students can become discouraged and frustrated. Research indicates that these factors may determine whether students continue with their nursing course and suggests large numbers of graduates pursue another field [4].

The lack of motivation to take up nursing as a profession is a major concern in China. In 2010, only 16.4 per cent of university nursing graduates selected nursing as their first choice major. The remaining number of graduates (83.6 per cent) had originally chosen other majors but failed to attain the necessary entry level requirements. Students who do have an interest in nursing but are from socially and economically disadvantaged backgrounds, meanwhile, often forego their interest in favour of professions with better wage prospects [28]. On entering a nursing program, students can become disillusioned when they realise a nurses' salary is lower than those of other professions. The fact that there are notably fewer scholarships opportunities for nursing compared to other majors also compounds the problem [15].

3.1.3. Inconsistency between training and practice

The disjunct between best practice advocated through university education and the reality of clinical practice has been cited as a reason for leaving nursing [3]. Much of the course content that students learn in their nursing course is not applied in clinical settings. For example, hospitals use a functional nursing model rather than the nursing-process model advocated during training [3] and clinical supervisors and preceptors have expressed feeling that students display too much theoretical knowledge and lack 'real' nursing skills [3].

Clinical placement, which requires students' full-time attendance with hospital-based preceptors, is more beneficial to hospitals than to students. In hospitals, students are used to absorb the high workload, instead of being able to consolidate their learning through clinical practice under supervision while being supported to become safe practitioners. Research has found that nursing students report feeling overburdened by the workload and working conditions when on clinical placement [4].

3.1.4. Nursing retention

Running in tandem with the need to improve nursing education in China is the critical need to increase the number of practicing nurses. By 2011, there were around 862 Diploma programs, 307 Advanced Diploma programs, 192 Baccalaureate programs, 65 Masters programs, and 10 Doctoral programs in China [26]. While taking into account the increasing number of graduates from these programs, there were still around 346,000 fewer nurses than required across China [23].

Due to the large land mass, large population and lack of retention in nursing, China's nursing shortage is more severe than in most developed countries [3] and is getting worse. In 2010, China's population was 1.3 billion with only 2.18 million

nurses [26], a ratio of 1000:1.6, and an improvement on the ratio of 1000: 1.25 in 2015 [29]. A significant factor affecting the number of available nurses is the rate of retention. Despite an increase in the number of nursing students and graduates, several issues impact on their decision to remain in the nursing profession [2,30]. One of the factors influencing nursing retention rates are the nature of contracts offered to graduates. Only a small number of graduates are hired as permanent staff with the majority of graduates placed on temporary contracts [6]. This leads to instability and uncertainty amongst the nursing workforce. As a result, many graduates leave China to take up nursing opportunities in other countries [31].

The low professional status of nursing is another issue affecting retention. A limited understanding of the nature of nursing and the role of nurses exists among public, patient, and doctor. In part this can be attributed to the fact that nurses perform many non-nursing tasks. For example, very often nurses have to chase up patient admission fees. In China, nurses are traditionally viewed as submissive and passive and subservient to doctors. The following Chinese adage illustrates this point: 'The doctor's mouth; the nurse's legs' [2]. This weak professional identity undermines the future of nursing.

3.2. Opportunities

With every challenge comes opportunity. The development of nursing education is increasingly supported by China's policy and regulations. The Ministry of Education's Instructional Committee for Nursing Education (ICNE) was founded in 2007 and is responsible for nursing program accreditation. Under the requirements of the committee, all full-time nursing courses offered have to attain course accreditation [4], however, there are no national standards for course accreditation that course must meet. The current Nurse Act (2008) was implemented in 2008 to support the progression of the nursing profession, and provides a legal basis for the enforcement of safe practice; it also stipulates the definition of nursing and nurse's rights [4]. These rights include equal work and equal pay, participation in continuing education, and encouraging patient advocacy that supports nurses to question medical prescriptions when there is doubt about the efficacy of the prescribed treatments [32].

In 2011, the nursing discipline was awarded first-class subject status by the state council [33] and as a consequence, nursing as a discipline is now enjoying an increasingly independent status. This change, however, has brought about demands for certain criteria to be met to enable nursing to claim its own unique body of knowledge and prepare nurses to practice at an advanced level in order to improve health outcomes. Some of these demands include the call for academic institutions to produce high level nursing research and teaching materials, to inform evidence-based practice [4].

4. Discussion

There is a strong link between quality nursing education and health outcomes [34]. Nursing education therefore is a

fundamental component in China's healthcare reform. This paper asserts that quality nursing education enables nurses to be credible-players in the future domestic and global healthcare labour market.

This paper argues that although some positive changes have occurred to help position nursing more favourably, China's nursing education still requires extensive reform in order to contribute to improving the quality of healthcare services. This is particularly pertinent today given the focus of the Chinese government, policymakers, and educational bodies which are currently making a considerable effort to address the challenges facing students at the further and higher education levels, and to expand opportunities for study [16,20].

This paper also argues for an evidence-based approach to nursing education, a standardised curriculum, the use of up-to-date nursing resources, modified pedagogical approaches, adequately resourced research opportunities, employer-funded professional development for nursing staff [2,4,12,15], and for a focus on enhancing out-dated public perceptions of nursing roles to attract students to nursing and thereby to improve nursing retention rates.

The course content in nursing programs and the pedagogical approaches used to educate students are important factors in preparing nurses to be adequately trained to cope with the healthcare demands in China. As previously discussed, one example of how the course content could be improved is to change the nursing curriculum from a bio-medical model to a nursing-oriented model, and shift the focus away from disease treatment and towards disease prevention and health rehabilitation [4,29].

By implementing changes to both nursing education and legislation surrounding nursing, there is greater potential for the profession to be more highly valued within the Chinese healthcare system. If knowledge and ideas are exchanged and resources freely shared within global nursing communities, such as Australia, there is greater opportunity for the public profile of nursing to be enhanced in China. To support improvements to nursing education and legislation, it is vital that research is undertaken. The current practice of employing doctors as educators and advisors in nursing programs should be re-evaluated. This is particularly the case for Doctoral nursing programs. It is critical that opportunities are created for Chinese nurses to take up positions as educators in the future. This move would support the nurse-oriented model of learning. It would also help facilitate the transmission of theoretical knowledge, skills and attitudes by educators with direct experience in the field. By elevating the status of trained nurses and by valuing the contribution they can make to the profession, education standards could be improved, retention rates could be increased, and the need for ongoing professional development could be seen as integral to maintaining high standards of healthcare practice. Again, Australia is a perfect example of a country that has made these moves and is enjoying the benefits.

In line with the current status of nursing education and the need to comply with international standards, nursing programs in China are in need of accreditation standards that support the foundations for transcultural nursing into the future [25]. This involves broadening the horizon of nursing to include a global perspective:

Globalisation of transcultural nursing means that nurses must expand their world view from a local or narrow perspective to a world view of nursing which shows concerns for and interest in diverse cultures and how to function in transcultural nursing contexts. It also means conceptualising the ways nurses would be able to meet the diverse human care needs of strangers who seek nursing services and to educate nurses to be culturally competent in different nursing contexts [35].

To better prepare nurses to work within a globalised health system, China's nursing programs should include subjects for example, on international health, culturally competent care, awareness of global nursing working conditions and health system infrastructure, and health professional migration. This would prepare Chinese nursing students to better manage within a domestic and globalised nursing workforce.

Being part of a wider network is well known to facilitate innovation [36]. China's nursing educational bodies should thus form strategic partnerships to share nursing knowledge and exchange information and best practices nationally and internationally. Sustainable global knowledge networks and the open exchange of curriculum innovation based on learning outcomes should be promoted. Continued investment in nursing education should become a national and international priority.

If China is to become a global player in the field of nursing, it must progress in parallel with international standards and trends. Supporting global communication and providing international links are important for the development of nursing practice worldwide [26]. China's experience of nursing education and the knowledge accrued would be relevant to other developing and developed countries.

With the predicted nursing shortage [37,38], the adequate provision of healthcare worldwide has become a challenge. There is, consequently, an urgent need for the provision of nursing education that generates and supports a safe and effective nursing workforce [3,4,13,23,26,29,39,40].

5. Conclusion

Nursing education in China must move towards collaborative learning with other countries to be able to more effectively contribute to the global nursing community. This paper has discussed the current status of nursing education in China and proposed strategies that could address the challenges it presents. There is also value in Chinese nursing authorities, educators, and legislators working together in a collaborative union of expertise in order to support the international progression of nursing.

This article is based on literature published in English only. Articles published in Chinese languages on nursing education in China have not been included. Whilst it is anticipated that the key issues raised in this review would not change, further detail may be gained through the inclusion of literature published in Chinese languages. Future reviews could include publications in the Chinese literature to generate a more comprehensive overview.

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