

## Education Article

# Issues and challenges in international doctoral education in nursing

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### Abstract

Education is a driving force in improving the health and welfare of communities globally. Doctoral education of nurses has been identified as a critical factor for provision of leadership in practice, scholarship, research, policy and education. Since the genesis of doctoral education in nursing in the USA in the 1930s, this movement has burgeoned to over 273 doctoral programs in over 30 countries globally. The present article seeks to identify the issues and challenges in nursing doctoral education globally, and those encountered by doctoral program graduates in meeting the challenges of contemporary health care systems. Information was derived from a comprehensive literature review. Electronic databases and the Internet, using the Google search engine, were searched using the key words ‘doctoral education’; ‘nursing’; ‘International Network for Doctoral Education in Nursing’; ‘global health’; ‘international research collaboration’. Doctoral education has been a critical force in developing nurse leaders in education, management, policy and research domains. An absence of consensus in terminology and of accurate minimum data sets precludes comparison and debate across programs. The complexity and dynamism of contemporary globalized communities render significant challenges in the conduct of doctoral programs. Addressing funding issues and faculty shortages are key issues for doctoral programs, especially those in developing countries, to achieve an identity uniquely their own. These challenges can also afford considerable opportunities for discussion, debate and the formulation of innovative and collaborative solutions to advance nursing knowledge and scholarship. In spite of discrete differences between countries and regions, the similarities in the issues facing the development of doctoral programs internationally are more striking than the differences. The harnessing of a global collective to address these issues will likely serve to not only forge the future viability of doctoral education of nurses but to improve the health and well-being of communities. This paper proposes international collaborative strategies to address a number of the challenges identified.

### Key words

doctoral education in nursing, global health, International Network for Doctoral Education in Nursing, international research collaboration.

## INTRODUCTION

International trends, such as globalization, technological advances and interdisciplinary care, challenge not only the delivery of health care but also the way in which nurses and other health professionals are prepared to meet the challenges of these dynamic environ-

ments. Doctoral education has traditionally been a milieu in which nurse leaders are nurtured and developed in clinical practice, research, policy and management. To maximize the potential of doctoral programs to develop leaders, they need to provide candidates with an eclectic, dynamic and responsive set of skills, not only in research, but also in advocacy, mentorship and leadership. In some regions of the world, such as North America, doctoral programs have been established for a long period (Redman & Chenoweth, 2005), whereas in countries such as Taiwan and Korea they are an emerging force in the preparation of nurse scientists, scholars and leaders (Chao, 2005; Kim, 2005).

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Traditionally, nurses have been dynamic and responsive to the needs of individuals and communities. More importantly, nurses traditionally have had a conceptual view of health care that is holistic with an emphasis on prevention, health promotion and facilitation of patient autonomy. This stance positions nurses in leadership roles favorably to tackle the complexity of health care issues and concerns in the contemporary world. It is therefore important to discuss the issues and challenges in doctoral education in nursing within a context of global health policy and directions. This article will present a discussion of selected issues in doctoral education from an international perspective and propose strategies through which some of the issues can be addressed.

### Millennium Development Goals

The Millennium Development Goals listed below tackle the complex interaction of socioeconomic determinants and health and provide an important framework to address health priorities (United Nations, 2005).

1 Eradicate extreme poverty and hunger. Specifically, reduce by half the proportion of people living on less than a dollar a day and suffering from hunger.

2 Achieve universal primary education. Completion of a full course of primary schooling.

3 Promote gender equality and empower women. Eliminate gender disparity in primary and secondary education, preferably by 2005 and at all levels by 2015.

4 Reduce child mortality. Reduce by two thirds the mortality rate among children under 5 years of age.

5 Improve maternal health. Reduce by three quarters the maternal mortality ratio.

6 Combat HIV/AIDS, malaria and other diseases. Halt and begin to reverse the spread of HIV/AIDS and the incidence of malaria and other diseases.

7 Ensure environmental sustainability. Integrate the principles of sustainable development into country policies and programs, reverse loss of environmental resources. Reduce by half the proportion of people without sustainable access to safe drinking water. Achieve significant improvement in the lives of at least 100 million slum dwellers, by 2020.

8 Develop a global partnership for development. For example, develop open trading and a financial system that is rule based, predictable and non-discriminatory.

A mapping exercise undertaken by a task force of the International Network for Doctoral Education in Nursing (INDEN) has revealed discrete research priorities according to geographic areas, such as infectious diseases in Africa and care of the elderly in developed economies (INDEN Research Priorities Task Force,

2005). Yet, in spite of these differences, there are also unifying mutual goals including the importance of primary prevention and promotion of healthy communities, caring for marginalized and vulnerable groups and the need to increase capacity and capability among nurses, as well as addressing global research issues (Global Forum for Health Research, 2000). A key deliverable of an organization such as INDEN is to not only address global health concerns strategically but to also inform and drive this agenda.

### International context of doctoral education

#### *Globalization and internationalization*

The aim of doctoral education is to prepare nurse scientists to function in leadership roles in academic, clinical and research settings within dynamic and complex health care systems and communities. The INDEN, a new international organization, has identified its aim as advancing and promoting high quality doctoral education in nursing through national/international collaboration and cooperation (INDEN Research Priorities Task Force, 2005).

Messias (2001) defines globalization as a dynamic process not merely related to international economic expansion but also the economic, political and social impact of migration and the diffusion of capital, goods, information and values across global borders. Globalization can be conceptualized as an intensification of human interaction often with paradoxical effects (Douglas, 2000; Davidson *et al.*, 2003). For example, global travel has created many benefits on social, economic and professional levels but has also increased the vulnerability of the world to the transfer of infectious diseases. Doctoral education, and in particular the potential of students from the developing world to partner with colleagues in the developed world, has resulted in a process of mutual dialogue and enrichment. These exchanges promote collegial and collaborative problem solving to many of the global challenges to health. However, in spite of this international exchange, nursing theory, research, education and practice often do not reflect a global perspective (Ketefian & Redman, 1997). Strategic collaboration and dialogue can increase the relevance of doctoral nursing education to changing global health care concerns.

#### *Health care trends and technological advances*

The delivery of health care is a dynamic phenomenon susceptible to social, economic and political factors (Davidson *et al.*, 2003). Despite the significant global

burden of infectious diseases, chronic disease and aging of populations feature as predominant health concerns in the developed world (Murray & Lopez, 1997). Globally, fiscal constraints in view of the escalating costs of health care have led to the development of more cost-effective models of care at best, and to the replacement of skilled nursing staff by untrained personnel at worst. The shortage of nurses and challenges in recruitment and retention have led to increasing scrutiny of methods of nursing education, in terms of the appropriateness and responsiveness of curricula to contemporary health concerns and the characteristics of clinical environments. The development of the concept of Magnet hospitals has been identified as a mechanism not only for recruitment and retention but also for promotion of quality of clinical care (McClure & Hinshaw, 2002).

### Current status of doctoral education worldwide

Doctoral programs in nursing are available in over 31 countries worldwide. These programs vary in their prerequisites, curricula, assessment standards and awards. Similarly, a diversity of titles in relation to doctoral programs and awards renders comparison of courses and awards confusing. Table 1 lists data collected by the INDEN. Encouraging is the increasing numbers of doctoral programs in the developing world. Graduates of these programs are expected to contribute significantly to addressing the issues and concerns of marginalized and disenfranchised communities. In spite of discrete differences, many of these programs share common challenges in meeting the demands of complex, dynamic health care systems, political environments and the demands of industry and government. Universally, programs struggle to meet faculty shortages as well as fiscal and funding constraints for doctoral and post doctoral programs. INDEN has spearheaded an international task force to develop a set of criteria, standards and indicators that can be applied globally to ensure the quality of doctoral programs. This task force included representatives from eight countries and identified the importance of demonstrating progressive assessment and cumulative development of scholarly skills (Kim *et al.*, 2005). As with any process, doctoral education should be a dynamic iterative entity within a quality improvement cycle. Development of a minimum data set will facilitate benchmarking, not just at an institutional level but also across institutions and countries.

### Models of doctoral education

Models of doctoral programs vary in aims, mode of delivery, content and assessment standards. Two

**Table 1.** International nursing doctoral programs

Location	Number
Argentina	2
Australia	15
Brazil	9
Belgium	4
Canada	11
Chile	1
Colombia	1
Czech Republic	4
Egypt	7
Finland	6
Germany	3
Greece	1
Hong Kong	3
Ireland	3
Japan	9
Korea	12
Mexico	1
Namibia	1
Netherlands	4
New Zealand	2
Norway	3
Philippines	3
Poland	1
South Africa	10
Sweden	8
Taiwan	4
Thailand	6
Turkey	6
UK	52
USA	93
Venezuela	1

International Network for Doctoral Education in Nursing (2005).

major models of nursing doctoral education have evolved and have influenced the patterns of doctoral education worldwide. One model is prevalent within the USA and countries in the Americas (Ketefian *et al.*, 2001), the other is prevalent within the UK and Europe (McKenna & Cutcliffe, 2001). The Pan-American model of doctoral education is typically regulated by a graduate school on research-intensive university campuses that sets overall standards and provides ongoing oversight to PhD programs in all disciplines. The nursing programs typically offer a period of coursework, followed by research experiences and one or two research projects, with the dissertation being at least the second project (the first may be a master's research project). Students are expected to select dissertation topics within faculty research areas and receive close mentoring. The dissertation is publicly defended and the student is

examined by an examining committee. Doctoral programs are offered under the auspices of nursing schools or departments that must have faculty engaged in programmatic research who have a track record of refereed publications and external funding, and who will mentor graduate students as well as junior faculty so they can gain experience as scholars, teachers and mentors.

The European model of nursing doctoral education places heavy emphasis on research, supervised by one major faculty member. At the time students apply they must present a research proposal they wish to pursue upon admission. Timelines are established, along with regular supervisory meetings and related strategies to assure student progression, in the absence of a structure provided by coursework and regular interaction with a cohort of students that can provide peer support. PhD degrees may be offered under the aegis of a nursing department or by a single faculty member housed within an interdisciplinary faculty. Variations from a 'research only' model also exist, such as PhD by published work and doctorates by portfolio. In the more recent past, professional and practice doctorates have arisen emphasizing relevance of scholarship to practice; these types of doctorates offer a component of coursework and a shorter-length thesis (dissertation). An increasing number of institutions in Europe are offering coursework to PhD students, such as in the area of research methods and/or other topics, depending on students' research emphasis.

As in many market situations these curricula are responsive to the demands of the market and expectations of key stakeholders. Sadly, many curricula are also based on tradition, personal preferences and sometimes charismatic leadership and nonempirical methods. Increasingly, there is a need to assure that graduates are well prepared to function in a dynamic health care system, increasingly driven by consumer demands, fiscal constraints and increased scrutiny and demand for quality.

### *Content of doctoral education*

Although the mode of delivery and configuration of content is flexible, there are critical elements of doctoral education in nursing that are pivotal to achieving the aims of leadership and scholarship. These include the following elements that need to be present in the learning environment to facilitate progressive development of students:

- 1 Knowledge, skills and scholarship aligned with the mission, value and goals of nursing.
- 2 An appreciation of the social, political and economic context of nursing research and scholarship.

- 3 Ability to think and communicate in a range of media in a scholarly and respectful manner.

- 4 An appreciation of a variety of methodological approaches to address study questions.

- 5 Specialization in a topic or methodology.

- 6 Network of fellow scholars, clinicians and appropriate experts to inform their program of research.

- 7 Ability to undertake scholarly and research activities at both an individual and collaborative level.

- 8 Skills in leadership and mentorship.

- 9 Knowledge and skills in the area of scientific integrity, including protection of human and animal research subjects.

- 10 Foundations of a program of research and a track record amenable to a career path in education, policy, research and practice (Davidson, 2005; Kim, 2005; Kim *et al.*, 2005; Loveland-Cherry & Phancharoenworakul, 2005; Slevin & Hanucharurnkul, 2005).

The content of doctoral programs needs to configure elements such as content, modes of delivery, assessment and quality assurance mechanisms to achieve the concepts listed above. Courses also need to meet the criteria of local institutions and governing bodies. Slevin and Hanucharurnkul (2005) identify that there are significant challenges in maintaining quality, credibility and consistency across and within doctoral programs. There are also significant challenges in accommodating competing demands and agendas within doctoral programs. Dialogue and debate regarding content and delivery of doctoral programs will likely contribute to innovative solutions to drive nursing research and scholarship. We should strive to harness the positive forces of globalization and the information age, not only to promote dialogue but also to develop innovative and responsive solutions to prepare nurses for the future.

### *Marketplace for doctorally prepared nurses*

Historically, the majority of nursing doctoral graduates has sought work in academe. However, this picture is changing as a result of two factors. The new global marketplace in many regions of the world is such that new opportunities are opening to doctorally prepared individuals in the field of health and nursing, with attractive prospects. At the same time, some qualified nurses are not attracted to academic careers due to non-competitive salaries, heavy demands of the faculty role, and the struggle to balance an academic/research career with family needs (Redman & Chenoweth, 2005).

The new international nursing marketplace makes different demands and requires the deployment of



different skills. In their survey of the literature on this topic, Redman and Chenoweth (2005) have identified several of these. Entrepreneurial opportunities in the form of private healthcare consultant services, employment in various governmental, international or non-governmental organizations through which nurses are shaping health care and social policies among others. These authors further suggest that this type of expansion of the marketplace affords new vistas to advance nursing scholarship, leadership, practice and policy.

The direction of the evolving marketplace has serious ramifications for how we educate doctoral students. The norm has been an emphasis on research skills, and to a lesser extent, on aspects of the faculty role. Clearly, this is inadequate; the doctoral education process now needs to incorporate experiences that prepare graduates for a broader spectrum of skills. Most importantly, it needs to inculcate flexibility in the learner so that the student can deploy the skill sets acquired during doctoral study to a variety of novel situations. This is the major challenge to doctoral educators.

While these changes are ongoing in the marketplace, many countries are experiencing moderate to severe faculty shortages in nursing education generally, and for doctoral education specifically. Many dynamics underlie this shortage phenomenon. Ketefian *et al.* (2005) describe the faculty shortage issues and some suggested approaches toward solutions.

An interesting phenomenon arises when one juxtaposes the calls for changing doctoral education to better meet the demands of the new global marketplace, ostensibly to enable graduates to find satisfying employment in new settings, on the one hand, and on the other, when we consider faculty shortage issues, where an implicit desire might operate to channel doctoral graduates toward academic and teaching careers. This can give rise to an ethical conflict and place doctoral educators in a conflict of interest situation. However, ultimately, individuals have to make choices that are most congruent with their life goals and interests, and in open-market societies, the marketplace forces will play their role in the picture that ultimately emerges. It is clear, however, that different forces will be at play in different countries, with different outcomes.

Some dissatisfaction has been leveled against doctoral programs, especially the PhD, for their tendency to produce individuals who are far removed from practice, and for conducting research not relevant to practice. This has led to the development of professional and practice doctorates in a number of countries, and PhD programs are responding in different ways as well to address the expressed concerns. Similarly, colleges

with a teaching mission have expressed dissatisfaction with the heavy emphasis on research, to the neglect of teaching and education-related skills. In some countries, there are currently efforts to address this problem through planned supervised teaching experiences and other individualized strategies.

### **Collaborative international strategies**

#### *Case study of faculty shortages and need for doctorally prepared nurses: Thailand*

The case study presented, while unique to Thailand, illustrates the type of thoughtful deliberation and delicate balancing taking place at a country level to arrive at solutions tailored to the country's needs.

Thailand has a total of 70 978 professional nurses in active practice. With a population of approximately 63 million people (Wibulpolprasert, 2002), the ratio of nurses per population is approximately 1 : 870. Srisuphan (1998) studied the issue of supply and demand for professional nurses for the year 2015. Her analysis suggested that there will soon be a nursing shortage in the country, unless the number of graduating nurses each year increases to 9000 from the current level of 7189 nationwide, which is 20% lower than the estimates for the need (Srisuphan *et al.*, 2002). Several factors are at play. The economic crisis in the late 1990s caused the government to downsize employees, whereby nursing colleges under the Ministry of Public Health (MOPH) decreased the number of nursing student enrollments by 40% of the previously set target. Another factor is the offer by the Thai Government of an early retirement scheme for nurses, which some nurses are taking advantage of, both exacerbating the shortage problem as well as reducing the pool of experienced nursing professionals in faculties. An added factor is the nurse migration to other countries, where nurses hope for better pay and working conditions.

In response to the prospect of severe expected shortages of nurses, the MOPH has increased the number of nurse enrollments within its schools by 1000 per year as of the year 2003. While this is a step in the right direction, it will not allay the problem entirely.

Regarding the qualifications of faculty, periodic national plans put forth the composition of faculty credentials. The plan set forth for 2007–2011 calls for a 5 : 5 ratio of doctoral and master's prepared faculty, whereas the current composition is 8.1 : 74.3 : 17.6 ratios for doctoral, master's and bachelor level preparation, respectively. This is far short of what is estimated and required to provide high quality instruction to nursing students. The assessment is that in 2011, 1312 doctorally prepared faculty members

will be needed to meet this requirement, which means an increase of 219 in the production of doctoral program graduates annually. Whereas currently, the six doctoral programs in Thailand graduate a combined total of 50 students each year. These numbers do not take into account the possibility that some doctorally prepared nurses may choose a different career route upon graduation. Thus, the picture that emerges reflects both the need to raise the absolute numbers of faculty to a 1:8 faculty to student ratio recommended by the professional nursing organization, as well as a shift in the qualification levels of faculty. It is now being recommended that Thailand develop a 10-year faculty development plan for the country, whereby the country would raise half of the needed doctorates, and the remaining number would be raised either by expanding the current jointly conducted international doctorate programs now in place with various institutions in the USA and Australia, or by sending some master's prepared faculty members overseas for the entirety of their doctorate study. The recommendation is also open to use of alternative modalities of education, such as PhD by research, common in Europe, or via online instruction, while students remain in their country and hold employment. These strategies will not only increase the faculty numbers, but will increase the pool of individuals qualified to conduct research to address the health care needs of the country. Various strategies can be used for collaborative national and international research once the required numbers are in place. In the current environment, qualified faculty are being used heavily for teaching, allowing little time for research and knowledge generation, a matter of major concern for the leadership in the country.

#### *International collaboration*

Space does not allow the enumeration of all issues confronting doctoral nursing education worldwide, nor is there a 'one-size-fits-all' strategy for addressing the issues. As the Thailand case study illustrates, each country needs to develop a plan and pursue approaches that are specific to the country situation and context. However, over several years of discussion, deliberation and working with international students and educators, the authors propose that a variety of forms of international collaboration, especially among and between countries/institutions with doctoral education experience and resources and those with less experience or access to resources, can go a long way in allaying the challenges that some countries are currently facing with regard to a number of issues previously described in this paper.

The INDEN is a new international professional organization that aims to advance and promote high quality doctoral education in nursing through national/international collaboration and cooperation. It has developed programming, based on a collaborative approach, that it believes will begin addressing some of the challenges described above.

Several task force reports specifically outline strategies to achieve related goals. For example, the task force on international research collaboration is intended to facilitate research collaboration between and among accomplished investigators and those who are new researchers and doctoral students, representing both developed and developing countries. Another task force has proposed a model for an international collaborative doctorate; the plan will make it possible for doctoral students enrolled in a doctoral program to seek short-term study opportunities with mentors in other countries who specialize in their area of research, involving study periods of different length. This is expected to provide students with specific expert mentorship during critical phases of dissertation work, and can also form the foundation for future collaboration. In another report on mentorship, INDEN is developing guidelines for mentorship, drawing on the views of faculty and doctoral students from many countries.

#### **CONCLUDING REMARKS**

The present paper has summarized the issues and challenges facing doctoral programs in nursing. In spite of regional variation, there are more similarities than differences in the issues faced by doctoral programs globally. Increasingly, doctoral programs are challenged by market demands to be responsive to the broader challenges facing the health and education sectors. This challenge requires not only proficiency in research methodologies but also a suite of knowledge and skills commensurate with the demands of leadership and change management. Globally, nurses are faced with increasing fiscal pressures and compelling demands for efficiencies. The global shortage of nurses, particularly experienced faculty members, compounds the complexity of these challenges. In parallel with these shortages there is an increasing demand for doctorally prepared nurses in order to address global health care challenges. The harnessing of international commitment and enthusiasm in a global collective, such as INDEN, serves to not only address common issues in health care systems but also foster mentorship and support, particularly in developing countries, to improve the health and well-being of our global health community.

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