Matching Standards and Needs in Doctoral Education in Nursing

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The debate about the number and type of doctoral degrees required in nursing has recurred with regularity throughout the history of nursing. National discussions about the shortcomings and relevance of the PhD within general higher education circles are described. Applicability of these concerns to nursing education is discussed. In the midst of this national debate, new nursing doctoral degrees are being proposed and implemented. Emergence of these new degrees has caused many to worry about replicating at the highest degree level the current confusion about nursing preparation at the entry level. A classification of doctoral degrees in nursing is proposed along with a call for standardization of degrees. (Index words: Graduate education; Nursing; Professional education; Doctoral degrees) J Prof Nurs 20: 40-46, 2004. © 2004 Elsevier Inc. All rights reserved.

Despite the high regard for the United States’ model of PhD education, there have been growing concerns about the appropriateness of that model by leaders in the United States. Internationally, there is increasing interest in professional doctoral degrees as one way to increase the relevance of the PhD. This ferment has also been seen among doctoral programs in nursing, where new degrees and new program objectives are emerging.

Pew Reenvisioning Project

Current developments in nursing are part of a larger national debate about PhD education. Amid growing concerns that PhD programs have become too focused on scholarly research—to the neglect of opportunities beyond the academy—the Pew Charitable Trusts sponsored the Reenvisioning the PhD Project. The 2-year project was conducted by the University of Washington with support of leaders representing five major higher education organizations (Nyyquist, 1999). Among the issues identified by those who prepared and hired PhDs were (1) overproduction of PhDs, (2) long periods of postdoctoral training, (3) a scarcity of academic positions for graduates, (4) overuse of doctoral students to teach undergraduate courses, (5) low program-completion rates, (6) lack of diversity of the student body, (7) onerous requirements for completing the degree, and (8) limited relevance of preparation for careers other than academic careers. Of these, the first four issues do not seem to be problems in nursing, but the other four warrant attention.

Overproduction of PhDs and a Scarcity of Academic Positions

The field of nursing suffers from an acute shortage of doctorally prepared faculty rather than an overproduction of PhDs. There has been sluggish growth in the number of graduates of doctoral programs, while at the same time a high proportion of current faculty members are approaching retirement age (Berlin & Sechrist, 2002).

Long Periods of Postdoctoral Training

Similarly, long periods of postdoctoral training have not been a problem in nursing. On the contrary, such training is not yet a well-established practice. The late emergence of postdoctoral training in nursing may be related to the usual career trajectory for nurses, in which new graduates of doctoral programs are typically...
middle-aged. In 1999, for example, the median age of new graduates was 46.2 years with 12% of graduates aged 55 or older (Berlin & Sechrist, 2002). Data from the National Research Council (1998) show that no other field has this problem to the same extent. In its last survey, the median age for all students in all fields was 33.8. The median age of nursing graduates was greater than the highest ages reported in other fields, including all of the health sciences (38.5) and education (44.3; National Research Council, 1998). Given their late start, the majority of nurses are ready for postdoctoral training or faculty positions at an age when most of their colleagues in other fields have reached the peak of their academic careers.

**OVERUSE OF DOCTORAL STUDENTS TO TEACH UNDERGRADUATE COURSES**

Whether or not nursing schools overuse doctoral students for teaching undergraduate students is unknown. Anecdotally, many major universities report that graduate students in nursing can earn more money in a few hours of clinical work and choose that option over teaching assistantships.

At the same time, many allege that the current focus on research preparation in PhD education rarely prepares a person to be a good teacher. This is especially true for students preparing for faculty roles in colleges and universities where teaching is the major mission and where time and reward systems for research are minimal. Many departments have responded by implementing programs to help their students develop as teachers. Advocating for better teacher preparation, Lee Shulman (2000), of the Carnegie Foundation for the Advancement of Teaching, draws a distinction between the discipline in which the PhD student is prepared and the vocation or profession he or she will pursue. He argues that the “profession” of a PhD is to be a scholar and a teacher. As a professional, the PhD has a dual obligation: to be steward both of the specialty of his or her scholarship and of the broader discipline of which the specialty is a part, i.e., not only to extend the knowledge of the discipline but also to profess it to others. In other words, the role of scholar and teacher are inseparable; each informs the other.

**LOW PROGRAM COMPLETION RATES**

There is limited information on completion rates of nursing doctoral programs. Attrition rates in doctoral programs in general are reported to be 50 percent or higher (Baird, 1993). The National Research Council (1998) reported a median time lapse between complet-
ously underrepresented (Fig 4). The Council of Graduate Schools provided the following argument for increased diversity when it noted:

Broadening the talent pool from which graduate students are chosen enhances the educational and scholarly activities of all students and faculty and is good academic policy. Graduate education establishes an atmosphere of intellectual collegiality in which interaction among people with differing points of view is essential to learning. (Council of Graduate Schools, 2003)

In other words, increasing the diversity of student bodies is not only the right thing to do, it is also good educational policy.

**ONEROUS REQUIREMENTS FOR COMPLETING THE DEGREE**

Doctoral students have complained that the prescribed curricula and the various hoops and rituals they must endure to earn the degree distract from their learning what they came to learn. The concern is that, in our quest for rigor and acceptance within the academy, we may have set up roadblocks to creativity and divergent pathways.

**LIMITED RELEVANCE OF PREPARATION FOR NONACADEMIC CAREERS**

The gold standard in nursing has been research-intensive preparation with well-funded faculty mentors who model research-intensive careers. There is growing concern that PhD programs focus too heavily on scholarly research to the neglect of all other faculty responsibilities and nonacademic careers. Many question whether such research-intensive training is useful for those who are not preparing for academic roles.

A second argument for the case that current PhD programs lack relevance is that there are many roles in nonacademic settings that could and should be filled by scientists but for which graduates are ill prepared. As Armstrong (1994) argued, we train doctoral students to ask narrowly defined questions and research them deeply. In so doing, the student learns how to learn at a very sophisticated level: how to pose a question, decide on the best method for answering it, obtain and analyze the necessary data, draw conclusions, and defend those conclusions assiduously. But faculty and students alike tend to forget that in conducting this very specialized inquiry, the student is also acquiring skills with more general use. The problem, as Armstrong sees it, is that both teacher and student lack training and experience in how to apply those skills outside the narrowly defined research area.

**DO NURSING PHDS LACK RELEVANCE?**

Critics of traditional PhD education allege that faculties of research-intensive universities socialize PhDs...
for research careers that many graduates will not be able to obtain. For example, the Australian educator Jill White observes:

Doctoral study within nursing and midwifery has been focused largely on the exposition of the philosophical underpinnings of the disciplines or on the patient’s experiences of illness, and the studies have predominantly been exploratory, interpretive works. Appropriate to their intent, these have been narrow-focused single pieces of work studied in depth, usually employing a single methodology and they have been generated within an individual supervisor-student research apprenticeship journey. These works have contributed significantly to the broad pallet of disciplinary understandings but have done little to change or challenge the realities of everyday practice in healthcare settings. (White, 1999, p. 19)

Although White’s criticism does not account for the growing number of intervention studies, she does suggest an issue common among professional disciplines. Should the research and scholarship be directed at fundamental questions or at more practically applicable answers to questions raised in the practice of the profession? And what of the practitioners who desire to enhance their clinical effectiveness and ability to function within their organizational and sociocultural spheres?

This quandary is neither new nor unique to nursing. Psychologists, for example, began grappling with the issue more than 50 years ago when 73 conference attendees gathered for 2 weeks for what is known as the “Boulder conference.” In the decade of the 1940s, there had been a roiling debate about how psychologists should be prepared for clinical practice. The outcome of the Boulder conference was a strong endorsement of the professional psychologist as both researcher and practitioner (Baker & Benjamin, 2000). According to one account of the conference, the scientist-practitioner model was built on the assumption that the basic needs of society for clinical psychology services required professional services and research contributions designed to improve understanding of human behavior, improve the accuracy of diagnostic procedures, and develop more efficient methods for treatment and mental health promotion (Raimy, 1950). But the consensus reached at the conference came after much debate about whether the professional (i.e., doctoral) role was needed at all and whether the professional psychologist could also be a researcher. Today, 46 of the 216 accredited clinical psychology programs offer the Doctor of Psychology (PsyD) degree (American Psychological Association, 2003).

### Types of Nursing Doctoral Programs

The struggle to sort out the differences among the various types of nursing doctoral programs seems to resurface every 7 to 10 years, and the subtle distinctions originally proposed have become rather muddy. As early as 1966, Peplau (1966) recommended two degrees: the PhD for generation of new knowledge and the Doctor of Education (EdD) or Doctor of Nursing Science (DNS) to prepare people to apply it. A decade later, Cleland (1976) noted that the PhD offered research-focused study to prepare nurses to develop the clinical science underlying practice. Professional programs, on the other hand, prepare users of research rather than investigators and focus on expert clinical practice. Citing lessons from other disciplines, Meleis (1988) suggested that other fields have given up the debate about the differences and resigned themselves to the PhD as the requirement in university educational systems, with the professional degree reserved for the clinical areas. While underscoring the intended differences between the research and professional doctorates, she advocated for the single PhD degree. She also recommended a comprehensive set of indicators and criteria for differentiating between the two types of PhD programs.

In her analysis of the history of doctoral education in nursing, Grace (1989) explained that the first nurses to earn doctoral degrees did so primarily in schools of education, focusing on methods of teaching and not the substantive content of nursing. Nurses turned to colleges of education not only because these programs met their needs as they were moving into academic roles, but also because schools of education were receptive to them as students. After World War II, more nurses entered programs in the natural and behavioral sciences, spurred by federal support from the Nurse Scientist Program.

It is widely assumed that many of the early schools to offer doctoral programs selected the professional degree (DNS, DNSc, DSN) because it was the only degree parent universities would permit them to offer. Meleis (1988) suggested that quality-control mechanisms of universities would not allow PhD degrees to be offered because of the few adequately prepared faculty, the fact that the proposers couldn’t prove the presence of a substantive knowledge base, and the lack of established faculty research trajectories.

Since 1970, most new doctoral programs in nursing have offered PhD degrees. But the new century has also seen the emergence of new programs that explicitly address a small but growing call for applied scientist-
clinicians in health care systems. Added to this desire is the realization that a large proportion of doctorally prepared nurses are not in traditional academic roles. Just 61.4 percent of nurses with doctorates are employed in nursing education (Spratley, Johnson, Sochalski, Fritz, & Spencer, 2000).

The emerging programs fall into two general categories: those that prepare clinicians at the doctoral level for direct patient care (e.g., the proposed Doctor of Nursing Practice (DrNP) program at Columbia University) and those preparing clinicians and specialists in administration, clinical research and teaching, public policy analysis, and political roles (e.g., University of Kentucky, Rush University, and Johns Hopkins University). Each assumes registered nurse licensure and a certain amount of clinical experience. The graduates of these programs will not represent a point on a continuum between researchers and practitioners but rather will be highly specialized practitioners of the profession engaged in either direct or indirect clinical activities.

These developments led the AACN task force charged with revising the quality indicators for doctoral education in nursing to propose the classification of nursing doctorates in Fig 5 (Edwardson, 2002). The classification makes a clear distinction between research-focused and practice-focused degrees. The Council of Graduate Schools distinguished between PhD and professional degrees as follows:

The professional doctor’s degree should be the highest university award given in a particular field in recognition of completion of academic preparation for professional practice, whereas the Doctor of Philosophy should be given in recognition of preparation for research whether the particular field of learning is pure or applied. (Council of Graduate Schools in the United States, 1977, p. 3)

In practice, there seem to be two types of degrees that are commonly referred to as “professional”: those that prepare for professional practice (e.g., DDS, MD, PharmD) and those with specific expectations for generation of applied knowledge (e.g., DrPH, EdD). The classification in Fig 5 is congruent with the Council’s definition in that it shows that, although most DNS-type programs are similar to the “professional” DrPH and EdD programs, some existing programs are more closely aligned with practice than the generation of knowledge. They are theoretically intended to prepare students to apply knowledge (Peplau, 1966) and engage in clinical investigations. Existing ND degree programs also fall into two groups: those that admit registered nurses and offer preparation for advanced practice roles (e.g., Case Western Reserve University) and one (University of Colorado) that prepares graduates for entry into the profession. (Case Western Reserve provides multiple entry points to its advanced practice ND, including a nonnursing baccalaureate preparation.) Whether this is the correct classification of nursing doctorates, it is clear that the profession and the public would be well served by standardization of degrees to dispel the current confusion.

There is growing interest in professional doctoral degrees (i.e., non-PhD research-oriented degrees) outside the U.S., especially in European and Australian universities. In an attempt to match education with the career needs of students and their future employers, a distinction is made between two modes of knowledge acquisition (Gibbons et al., 1994). In the first mode, universities hold center stage by producing basic knowledge that is then applied to solve practical problems. In the second mode, knowledge development is as likely to occur in the marketplace as in the university. Innovation is not seen as a derivative of science but autonomous from it, and users of knowledge are involved in defining the research problem.

Working in a context that includes university, profession, and workplace, the student and the advisor conceptualize and “reflexively represent” the nature of the intersecting space of the three realms. The workplace becomes both the place where new knowledge is developed and the object of reflexive analysis (Lee, Green, & Brennan, 2000). Because students come to their doctoral studies with substantial professional experience, they might know more about a specific topic area than the faculty member. The professor might have to rely on the student and/or colleagues outside the university to provide some of the mentoring and serve as examiners.

**Number of Doctoral Programs**

In addition to the national discussions about the preparation and roles of PhDs, some nursing leaders have also expressed concern that nursing doctoral programs are growing faster than the resources needed to maintain high quality (Hinshaw & Berlin, 1997;
Anderson, 1999). In 1997, Hinshaw and Berlin analyzed data from several sources and conducted a survey of school research offices to identify the characteristics of excellent doctoral programs. Using the AACN quality indicators and the National Institute of Nursing Research definition of a research-intensive environment, they identified a number of variables that correlated with being a ranked school in the U.S. News and World Report rankings. These included the proportion of doctorally prepared graduate faculty, the number of National Institutes of Health grants and publications, the presence of a general research office and centers of excellence, the number of students, the proportion of full-time students, and the duration of the doctoral program. Not related were the proportion of tenured faculty, the proportion of doctorally prepared faculty, and Carnegie classification. In a multivariate analysis, only the number of publications and the duration of the program were selected as important predictors of rankings (Hinshaw & Berlin, 1997).

The Hinshaw and Berlin (1997) and Anderson (1999) challenges created a stir. Although many applauded their conclusions, others saw them as attempts by already established, research-intensive doctoral programs to halt the establishment of new programs. The research degree has been the most coveted for a number of reasons, not the least of which is the need to develop the scientific and philosophical knowledge necessary to answer important questions concerning nursing care. However, it is also true that a PhD program enhances the prestige of a school and supports its efforts to recruit faculty and students.

Where Do We Go From Here?

Although the discipline cherishes the research degree, it is impossible to ignore the growing concern in higher education here and abroad that the single model of PhD education is not serving us well. Although nursing does not have problems with, for example, overproduction or a lack of career opportunities, many doctorally prepared nurses do not choose academic careers, especially academic careers in colleges and universities whose primary mission is education rather than the tripartite mission of the research university.

Other nations and other disciplines have chosen a variety of strategies to address current shortcomings. Among these is the introduction of different types of doctoral degrees. The AACN task force to revise doctoral quality indicators came to the conclusion that the existing distinctions between the PhD and DNS speak more to the purpose and content of research-oriented doctoral programs than indicators of program quality. The purposes of the PhD are to prepare students for a lifetime of intellectual inquiry and creative scholarship and research; to provide preparation that leads to careers in academics, government, business, and industry; and to result in the extension of knowledge (Council of Graduate Schools in the United States, 1977). The purposes of the professional nursing doctorate, on the other hand, are to identify gaps in knowledge for practice; conduct research on nursing interventions and health care outcomes; develop, test and implement innovations in health care delivery; and teach the next generation of advanced nursing practitioners. Programs of both types are research intensive, require similar sets of resources, and have similar expectations of what faculty and students do.

The classification of doctoral programs presented in Figure 5 attempts to distinguish between research-focused and practice-focused programs and suggests that the profession has found a need for more than one degree. Discussion of the distinctions has recurred many times, but it continues to be important. Leaders in nursing must join other national leaders in higher education in evaluating graduate preparation so that we can be responsive to the real-world needs of the profession while at the same time maintaining the degree of autonomy and devotion to the discipline that is necessary to advance knowledge.

References


