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DNP and PhD scholarship: Making the case for collaboration

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ABSTRACT

Background: The Institute of Medicine calls for meaningful collaboration between doctor of nursing practice (DNP)- and doctor of philosophy (PhD)-prepared nurses to improve health outcomes.
Purpose: The purpose of this paper is to answer the questions: 1) how do Colleges of Nursing influence DNP and PhD collaboration for faculty and students? 2) how does DNP and PhD collaboration in an academic setting impact health care practices and patient outcomes?
Methods: Two examples of DNP and PhD collaboration (one faculty and one student) are presented.
Results: Shared faculty responsibilities and a supportive organizational culture influenced collaboration between faculty and students. Research and practice roles can complement and strengthen each other while improving health outcomes.
Conclusion: Colleges of Nursing should build processes and culture that encourage faculty and students to collaborate across doctoral programs. Successful intraprofessional collaboration has the potential to positively impact healthcare quality, and outcomes, while advancing the nursing profession.

Introduction

The Institute for Medicine (IOM) Report, *The Future of Nursing: Leading Change, Advancing Health* calls for meaningful collaboration between doctor of nursing practice (DNP)-prepared and doctor of philosophy (PhD)-prepared nurses, faculty and students as a means to improve individual and population health outcomes (Institute of Medicine [IOM], 2011). Historically, the relationship between DNP- and PhD-prepared nurses has evolved from one of competition to one of collaboration (Edwardson, 2010). Collaboration between doctorally-prepared nurses will lead to enriched opportunities for nursing education, scholarship, and practice (Murphy, Staffileno, & Carlson, 2015). In order to further develop a complementary approach to nursing in which knowledge generation and application are carried out to the highest level of rigor, collaboration between DNP- and PhD-prepared nurses must begin in academic settings.

Background

DNP- and PhD-prepared faculty members have a unique opportunity to impact nursing practice, education and scholarship through modeling intraprofessional collaboration and promoting similar partnerships between students. Although DNP and PhD programs provide complementary approaches to the highest level of nursing education, they differ in goals and competencies. DNP programs focus on innovative and evidence-based nursing, applying research findings to the highest level of practice (American Association of Colleges of Nursing [AACN], 2006). PhD programs concentrate on research methodology and require an original research project, dissertation defense and related research papers (AACN, 2010). Though the approaches to education are different, collaborative experiences between DNP and PhD students can occur throughout academic programs: during foundational coursework, during project/dissertation work, and post-degree (Buchholz, Yingling, Jones, & Tenfelde, 2015). Facilitating intraprofessional collaboration may result in mutual respect and understanding of knowledge and skills, creating a culture of collaboration that continues beyond education and into professional nursing practice (Edwards, Rayman, Diffenderfer, & Stidman, 2016).

While collaboration between DNP- and PhD-prepared nursing faculty is acknowledged as important, literature on the topic is limited. A qualitative study exploring the determinants of effective DNP and PhD collaboration found that it is often hindered by a lack of understanding about the DNP skill set, limited knowledge of PhD research, inadequate opportunities to collaborate, lack of structural support, and mismatched interpersonal characteristics (Staffileno, Murphy, & Carlson, 2017). Another study found that DNP and PhD faculty collaboration led to mutual respect and increased shared grant writing efforts (Edwards et al., 2016).

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Literature describing DNP and PhD student collaboration is also limited. Faculty from East Tennessee State University purposefully designed curriculum, student experiences and resource utilization to prioritize collaboration between DNP and PhD students, resulting in increased retention and satisfaction (Edwards et al., 2016). Another study found that DNP and PhD students who engaged in collaborative projects, reported clarity about the role of DNP- and PhD-prepared nurses and worked together in writing abstracts and manuscripts, increasing scholarly productivity (Eaton, Gordon, & Doorenbos, 2017).

While these studies provide important insight into collaborative efforts, descriptions of the specific influences and impact are needed. Influence describes inputs such as skills, experiences and values needed for the collaboration (Arabi, Rafii, Cheraghi, & Ghiyasvandian, 2014). Conversely, impact is defined as outcomes, related to how (and how effectively) institutional resources are being used to build knowledge (Greenhalgh, Raftery, Hanney, & Glover, 2016). Further study of the influences and impact of DNP and PhD collaboration is needed to develop strategies for effective intraprofessional collaboration between faculty members and students.

Conceptual model

DNP- and PhD-prepared nurses participate in scholarship in distinctive, yet synergistic ways. Courtney and Neiheisel (2011) developed a model (Fig. 1) to explain this complementary approach to practice and scholarship based on the assumption that alone, each dimension of DNP and PhD scholarship is insufficient (Buchholz et al., 2013). It is only in collaboration that knowledge generation and application can reach full potential in improving patient and population outcomes (Buchholz et al., 2013; Courtney & Neiheisel, 2011). The model illustrates that while roles frequently overlap, DNP-prepared nurses, as practice scholars, regularly focus on knowledge application, while PhD-prepared nurses, as research scholars, often focus on knowledge generation (Buchholz et al., 2013; Courtney & Neiheisel, 2011). The model further demonstrates the impact collaboration can have on nursing practice when both perspectives are valued and executed in alignment with each other (Buchholz et al., 2013; Courtney & Neiheisel, 2011). This model can serve as a framework for the development, execution, and evaluation of DNP and PhD collaboration and was used to guide the collaboration descriptions in this paper.

The purpose of this paper is to describe DNP and PhD collaboration in an academic setting. The description is guided by the following questions: 1) How do Colleges of Nursing *influence* DNP and PhD collaboration for faculty and students? 2) How does DNP and PhD collaboration in an academic setting *impact* health care practices and patient outcomes?

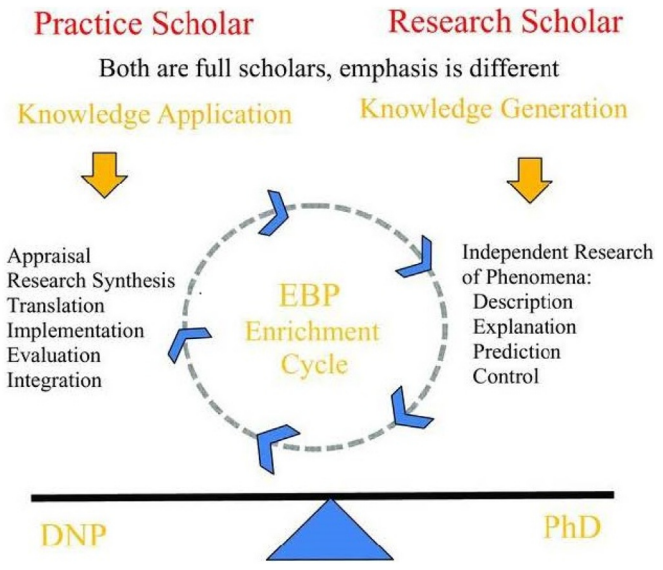

Fig. 1. Courtney & Neiheise model for DNP and PhD collaboration.

Methods

One example of DNP and PhD faculty collaboration and one example of DNP and PhD student collaboration are presented here to describe DNP and PhD collaboration in an academic setting. This project was reviewed by the authors' Office of Research Compliance and the Office of Human Subjects' Protection Institutional Review Board and acknowledged as a quality improvement project.

Context

Both collaboration examples occurred at a research-intensive College of Nursing in the Midwest. In its vision, the college seeks to lead through innovation in practice, education, scholarly inquiry, and research, demonstrating a commitment to the advancement of nursing science in all forms. The college offers master's and doctoral (DNP and PhD) programs, and does not offer a baccalaureate degree program. The collaborators in the faculty example are the authors of this paper. The collaborators in the student example were identified by a colleague of the authors.

Measures

To answer the guiding questions, and in alignment with the model by Courtney and Neiheisel (2011), the authors created the following prompts: 1) Describe your DNP and PhD collaboration. 2) Describe facilitators and challenges of your DNP and PhD collaboration. 3) Describe the impact of your DNP and PhD collaboration. 4) Describe how the roles of the DNP and PhD were or were not complementary in your collaboration.

Collaborators in the faculty case met to reflect on their experience, writing notes in response to the prompts. Student collaborators were contacted via e-mail and invited to schedule a phone-interview. A phone-interview was conducted by one of the authors, with one of the students, using the prompts. Manuscripts published by the faculty and student collaborators related to the collaborative projects were also reviewed. Authors then developed descriptions of each example of collaboration. Once complete, the student report was sent to the two students for validation.

Results

Description of DNP and PhD faculty collaboration

At the institution where the authors work, faculty workload is assigned to allow sharing of responsibilities between DNP- and PhD-prepared faculty. Responsibilities include teaching, advising and mentoring, service and committee work, and research and scholarship. This approach allows faculty members to share administrative staff, and technical support, therefore capitalizing on limited college resources. Based on shared teaching and advising responsibilities, the authors, one DNP-prepared and one PhD-prepared, formed a working relationship to efficiently and more effectively complete their teaching responsibilities. Working together over the course of two academic terms, through professional discussions, they identified a shared scholarly interest of childhood obesity management.

In 2014 the PhD-prepared faculty member was awarded private funding that protected her time to pursue scholarly activities. She identified a clinical partner with an interest in managing childhood obesity in primary care to align with expert guidelines (Barlow & Expert Committee, 2007). Reflecting on prior conversations, she understood that her DNP-prepared colleague had previously addressed this clinical

need in her own scholarly work (Cygan, Baldwin, Chehab, Rodriguez, & Zenk, 2014). She invited her colleague to partner in the development, implementation, and evaluation of a quality improvement (QI) project.

The authors utilized complementary skills from their respective terminal degrees and experiences to develop a robust QI project. The DNP-prepared faculty had expertise in developing, implementing, and evaluating QI projects. She also had clinical experience working in pediatric primary care offices addressing childhood obesity. The first phase of the collaborative project included a chart audit to identify strengths and weaknesses in provider adherence to expert guidelines for management of childhood obesity (Reed, Cygan, Lui, & Mullen, 2016). The DNP-prepared faculty member previously led a similar project. The authors relied heavily on her clinical experience, were able to build on her knowledge, and used the chart audit tool she developed for her previous project (Cygan et al., 2014).

The PhD-prepared faculty had expertise in implementing, evaluating and disseminating research projects using a variety of qualitative and quantitative methods. She had clinical experience addressing childhood obesity in a variety of practice settings. In the second phase of the project, a pre- and post-intervention chart audit was completed to evaluate documentation of the 20 assessment measures included in the expert guidelines. Statistically significant improvements were found in documentation of parental obesity, family medical history, sleep assessment, endocrine assessment, and weight classification as a diagnosis, demonstrating a positive impact on provider adherence to expert guidelines (Cygan, Reed, Lui, & Mullen, 2017). During this phase of the project, the authors relied heavily on the PhD-prepared faculty member's traditional research background to ensure study methodology and data analysis were appropriate.

Based on their complementary working relationship, the authors were able to easily decide upon roles and responsibilities from the onset of the project. When deciding upon roles, the authors carefully took into consideration specific skill sets as well as personal preferences and characteristics. They determined who would be responsible for 1) project implementation and evaluation, 2) communication with stakeholders, and 3) authorship. The PhD-prepared faculty member worked with data management staff to gain access to the dataset and a statistician to develop a data analysis plan. Findings from the initial chart audit (Reed et al., 2016) informed the DNP-prepared faculty's efforts to work with providers in implementing evidence-based changes to clinical practice. To align with their respective skill sets and project responsibilities, the PhD-prepared faculty member assumed first author responsibilities for the manuscript describing the first phase of the project while the DNP-prepared faculty member assumed first author responsibilities for the second phase manuscript.

This example of faculty collaboration demonstrates how DNP- and PhD-prepared faculty members can utilize complementary skill-sets to strengthen nursing scholarship and practice to positively impact healthcare practices.

Description of DNP and PhD student collaboration

As a result of shared advising responsibilities, faculty members identified an opportunity for a DNP and PhD student to collaborate in scholarship. As part of her PhD program, a student collected data on hospitalizations for HIV-infected prisoners of the U.S. Marshals Service (USMS) (Price et al., 2016). Her advisor asked a colleague to be the second reader on this project. The second reader of the PhD project identified this topic as a scholarly interest of her DNP advisee. The two faculty members presented an opportunity for the DNP and PhD students to collaborate in further developing their scholarly activities. Through faculty introducing the students and facilitating early discussions, the two students formed a working relationship.

The PhD student conducted original research entitled, *Hospitalization among HIV-Infected U.S. Marshals Service Prisoners*. The purpose of her research was to determine the number of HIV-related hospital admissions and average length of stay for prisoners of the USMS. Findings included a higher rate of hospitalization and longer average length of stay for USMS prisoners when compared to the national average, with clinical implications for improved care coordination (Price et al., 2016).

The DNP student had clinical experience working with USMS prisoners. In developing her DNP project proposal, the student encountered difficulty finding data to describe the health needs of this unique and vulnerable population. Building upon the newly formed collaborative relationship, the two students had scholarly meetings to discuss the needs of the population and the DNP student was able to use the unpublished data collected by the PhD student as the basis for her project. As a result, she developed, implemented and evaluated her final DNP project entitled, *Care Coordination of Hospitalized Prisoners in U.S. Marshal Service Custody*. This QI project resulted in decreased length of stay and re-hospitalizations for the population.

Although patient outcomes improved as a result of the student projects and the students acknowledged the positive impact of their work on the patient population, the two students did not always view each other as collaborators, and they did not acknowledge the value of their complementary skill sets (C. Cherry, personal communication, November 13, 2017).

Results from this example demonstrate how shared faculty workload may lead to student collaboration, and how terminal degree nursing students can effectively use their complementary skills sets of knowledge generation and application. Further, this collaboration resulted in improved patient outcomes for an underserved population.

Discussion

In response to the IOM's call for increased intraprofessional collaboration and gaps in the literature, the authors described experiences of DNP and PhD collaboration. To understand the influences and impact of DNP and PhD faculty, and student collaborations, two examples were described. Literature on intraprofessional collaboration of doctoral nurses, faculty and students is sparse. This paper adds to the growing body of literature by exploring specific factors which *influence* the College of Nursing's DNP and PhD collaboration and the *impact* of the collaboration on health care practice and patient outcomes.

Influences on collaboration

Based on these examples, shared teaching responsibilities and a college culture built on respect for both terminal degrees creates opportunities for collaborative scholarship between DNP- and PhD-prepared faculty and facilitates partnerships between DNP and PhD students. Based on shared teaching responsibilities, faculty in the first example built a working relationship allowing them to get to know each other and understand how their complementary skill sets could be used in scholarly activities. Getting to know each other personally and professionally has been identified as an important part of the DNP and PhD collaborative process (Cowan, Hartjes, & Munro, 2019). In this example, as a result of teaching together, collaborators understood and were able to capitalize on personal and professional strengths. Assigning shared teaching responsibilities should be explored as a mechanism to foster relationships between DNP- and PhD-prepared faculty.

The example of faculty collaboration was based on mutual respect, trust, and equitable partnership. Mutual respect and trust between faculty members was built over time by consistently meeting expectations of their shared teaching work. Established trust influenced the equal sharing of ideas and was the foundation for setting and understanding clear roles and expectations. Setting clear expectations that take into consideration not only professional skill sets but also personal strengths, working styles, and preferences is essential to successful DNP and PhD collaboration (Cowan et al., 2019). Faculty, in this example,

set clear expectations that included attendance at a standing, weekly meeting for scholarship and writing activities, adherence to a mutually agreed upon timeline, delegation of project tasks, and the use of shared technology (e.g. GoogleDocs) to facilitate collaboration. Delegation of tasks was based on personal preferences and professional expertise. Developing a trusting, respectful relationship was essential to the success of the DNP and PhD collaboration. This relationship is in contrast to the challenging faculty collaborations described in previous literature where unequitable relationships between DNP- and PhD-prepared faculty led to sabotaging, derailing, degrading, and power playing (Clark, 2013).

Optimal intraprofessional experiences take place in communities that intentionally commit to equitable power in the academic community, with parity between DNP- and PhD-prepared faculty members (Staffileno, Murphy, & Carlson, 2016). The professional culture of the author's College of Nursing placed value on collaboration and fostered respect for DNP and PhD contributions to nursing science, laying the groundwork for their partnership. Staffileno et al. (2016) offered a blueprint of strategies for promoting a DNP and PhD inclusive intellectual community. Strategies include shared governance, collaborative endeavors, scholarly opportunities, and shared teaching responsibilities (Edwards et al., 2016; Staffileno et al., 2016). It is critical that administrators and faculty to promote these strategies to create a culture in which working relationships between DNP- and PhD-prepared faculty can succeed.

While the student collaborators were enrolled at the same College of Nursing and shared a common employer, they were unaware of their shared scholarly interest. As a result of their shared advising responsibilities, their academic advisors facilitated the students' collaboration, demonstrating again the positive influence shared faculty responsibilities can have on DNP and PhD collaboration. DNP-prepared faculty serve on PhD student committees; similarly, PhD-prepared faculty serve as DNP project advisors and on DNP committees (Carlson, Staffileno, & Murphy, 2018). This integrated approach to doctoral nursing education has been shown to be cost effective, build collegiality, and strengthen terminal degree programs (Edwards et al., 2016) and should be explored to facilitate collaborative scholarship between faculty and students.

While positive influences of collaboration were identified, there were also opportunities to better foster collaboration between DNP and PhD students. Although patient outcomes improved as a result of the student projects, students viewed each as resources more than collaborators. They may have benefited from intentional application of a collaborative model, such as the five-stage process model of collaboration (Gitlin, Lyons, & Kolodner, 1994), where nursing faculty facilitated dissertation and capstone projects through collaboration between DNP and PhD students who subsequently gain a better understanding of their distinct skill sets as well as the training each receive (Eaton et al., 2017). This model should be considered to develop dynamic collaborations between DNP and PhD students allowing them to recognize and fully apply their complementary skill sets.

Historically, DNP and PhD collaborations were met with resistance (Edwardson, 2010). However, as the DNP-prepared workforce increases and intraprofessionalism is incorporated into graduate curriculum, this perception is shifting. DNP- and PhD-prepared faculty and administrators believe that increased collaboration can enhance student learning (Nickasch, Lehr, Schmidt, Henne, & Wippich, 2018). While nursing faculty find value in DNP and PhD student collaboration, one barrier to student collaboration identified in the literature is the existence of “professional silos” that lead to missed educational and scholarship collaboration opportunities for current DNP and PhD students (Travers, Wies, & Merrill, 2018). Travers et al. (2018) suggest that participation in doctoral student organizations may be one method to foster relationships between DNP and PhD students. A new initiative to overcome this barrier at the authors' institution is the establishment of a student project repository. This repository is intended to compile data including student contact information and progam, clinical/research site, and project topic. College faculty will have access to this data to identify potential DNP and PhD student collaborations.

Impact of collaboration

The examples of intraprofessional collaboration described in this paper, lead to improved healthcare practices and population health outcomes. The QI project conducted by the DNP- and PhD-prepared faculty had a positive impact on provider adherence to clinical standards (Cygan et al., 2017), increasing the quality of healthcare practices (Agency for Healthcare Research and Quality, 2017). The DNP and PhD student collaboration decreased the length of stay for hospitalized prisoners, which led to better patient outcomes and improved quality of care, which drive patient outcomes and healthcare costs (Institute for Healthcare Improvement, 2018). The examples presented demonstrate the impact DNP and PhD collaboration can have on the quality of healthcare practices and patient outcomes, providing additional rationale for the incorporation of this type of collaboration.

Limitations

The quality improvement design of this report is a limitation. Considering both collaboration examples are from the same College of Nursing, generalizability of results and conclusions is limited. Additional study of similar collaborations in a variety of academic settings may lead to generalizable implications for best practices. Additionally, the impact on patient outcomes was not measured in the faculty collaboration, and costs were not measured in either collaboration. Study of patient outcomes and healthcare costs may identify the potential that DNP and PhD collaboration has not only on healthcare practices, but also on patient outcomes and costs, further strengthening the case for DNP and PhD collaboration.

Conclusions

This paper describes influences and impact of DNP and PhD collaboration and may serve as a useful guide for other Colleges of Nursing. DNP- and PhD-prepared nurses have complementary, though distinct skill sets. Engagement in intraprofessional collaboration realizes the complementary roles of DNP- and PhD-prepared nurses. Colleges of Nursing should foster a culture that encourages faculty and students to engage in collaboration across doctoral programs. Shared responsibilities and an organizational culture that values collaboration and respect between DNP and PhD-prepared faculty can positively influence collaborative scholarship and in turn impact the quality of care.

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