

Barriers, facilitators, and opportunities for Doctor of Nursing Practice engagement in translational research



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ABSTRACT

Background: Little is known about how Doctor of Nursing Practice (DNP) graduates apply translational research competencies in the practice setting.

Purpose: This qualitative descriptive study aimed to explore the barriers, facilitators, and opportunities for engaging in translational research among DNPs in practice.

Methods: We conducted semi-structured interviews with 11 DNPs working within an 8-hospital health system from November 2020 through July 2021.

Discussion: We identified four themes related to barriers (invisibility of the DNP degree and skillset; lack of role clarity and organizational structure for DNPs; lack of time for engagement in translational research; lack of support for engagement in translational research), one theme related to facilitators (encouragement from colleagues and supervisors), and two themes related to opportunities (DNP education promotes recognition of nurse role in translational research; DNPs are interested in role expansion to include translational research).

Conclusion: DNPs have the interest and training to engage in translational research but face structural barriers to doing so.

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Introduction

The Doctor of Nursing Practice (DNP) degree serves a dual function of preparing advanced practice registered nurses (APRNs) with clinical expertise to meet increasingly complex patient care needs and providing a pathway to a terminal degree that has greater relevance to practice than traditional research-focused doctoral degrees (e.g., PhD, EdD, DNSc; Chism, 2009; Melnyk, 2013). DNP programs were developed concurrently with the patient safety movement and shaped by Institute of Medicine reports such as “Keeping Patients Safe: Transforming the Work

Environment of Nurses” (Institute of Medicine, 2004), which emphasized the critical role of nurses in patient safety and called for widespread changes in care delivery structures to remove barriers and maximize nurse agency to take action (McCauley et al., 2020). Recommendations from Institute of Medicine reports included that health care organizations establish leadership roles for nurses at all levels; nurses function as equal partners in interdisciplinary health care teams; nurses receive additional education; and health care organizations support evidence-based practice at all levels and for all disciplines.

Patient safety trends influenced American Association of Colleges of Nursing (AACN) to expand the scope of DNP education from clinical practice only to include all forms of advanced practice nursing, both clinical and nonclinical, reframing the degree as a “practice-focused” terminal degree available to all master's prepared nurses (AACN, 2004). AACN placed an emphasis upon preparing

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DNPs for nonclinical leadership roles as well as clinical roles, with the goal of improving the quality and safety of health care delivery through evidence-based practice and quality improvement. At the same time, AACN took the position that the DNP should replace the master's degree as the entry-level degree for advanced practice nursing and set a goal of achieving this by 2015 (AACN, 2004).

AACN's revised framework and objective for the DNP shaped the trajectory of evolving program structures and curricula (Martslof et al., 2015; McCauley et al., 2020). A broader scope of APRNs—namely nurses who had post-baccalaureate education but were not licensed independent practitioners like nurse practitioners, nurse midwives, or nurse anesthetists—became eligible for admission to DNP programs, and some programs developed tracks that allowed bachelor's-prepared nurses to seek the degree (McCauley et al., 2020). Many DNP programs shifted focus away from clinical practice and toward preparation in administration, management, education, quality, and other leadership roles (Killien et al., 2017). While there is variation across DNP programs and specialties, a unifying goal set by AACN (2006) is to develop knowledge and skills for evidence-based practice, quality improvement, and the application and evaluation of novel technology and approaches to nursing practice. Taken broadly, these activities fall under the umbrella of translational research, which is research that facilitates and ideally accelerates the movement of new knowledge into practice through iterative implementation, refinement, and optimization of new practices in the clinical setting using a team science approach (Thornicroft et al., 2011).

Though AACN's goal of transitioning the entry-level degree to advanced practice from master's degree to DNP by 2015 has not yet been achieved, the number of DNP programs has expanded exponentially over the past two decades, growing from 20 in 2006 to 357 in 2019, with annual student enrollment and graduation nearing 40,000 and 8,000, respectively (AACN, 2020). Despite this rapid growth, few studies have characterized the roles and activities of DNP-prepared nurses in clinical settings or examined the impact of DNP-prepared nurses on clinical quality and safety (Beeber et al., 2019). In particular, there is a dearth of information about how DNP-prepared nurses use the nonclinical aspects of their training—especially skills related to translational research—to improve care delivery processes and outcomes. This study aimed to explore the barriers, facilitators, and opportunities for engaging in translational research among DNP-prepared nurses employed in a large urban health system.

Methods

Study Design, Setting, Sample, and Recruitment

This study used a qualitative descriptive method to capture participants' experiences and perceptions (Doyle et al., 2020). We recruited a purposive sample of DNP-prepared nurses employed in any role within our academic health system, which includes 8 acute care hospitals (community, specialty, and tertiary/quaternary facilities totaling over 2,000 beds) and over 400 ambulatory practices that serve a diverse population with respect to age, sociodemographic, and socioeconomic characteristics across the New York Metropolitan region. We aimed to have diversity in our sample with respect to age, cultural background, years of experience in nursing, years of experience since DNP completion, and DNP program focus (e.g., clinical, administrative), specialization (e.g., patient population, leadership skillset), track (e.g., bachelor's entry, master's entry) and mode of delivery (e.g., on-line, in-person, hybrid).

Recruitment began following a category two exempt determination from the health system's institutional review board. We circulated a recruitment flyer via email to all applicable nursing

listservs throughout the health system, which included those for nurse leaders, administrators, advanced practice providers, and subscribers to an institutional listserv about nursing research. Nurses who were interested in participating responded to the study team via email to schedule one-to-one interviews, which we conducted virtually on a secure web-based meeting platform.

Data Collection

We developed a semi-structured interview guide to elicit participants' experiences and perspectives on their career trajectory prior to earning the DNP degree, motivation for seeking the DNP degree, structure and curriculum of the DNP program, career trajectory after earning the DNP degree, barriers, facilitators, and opportunities for engaging in translational research and applying the DNP skillset in practice, and recommendations for how health care organizations should develop roles and structures to best utilize the DNP skillset (Appendix). We used "grand tour" questions to introduce the topic (e.g., "Please explain what motivated you to pursue your DNP"), mini tour questions to evoke specificity (e.g., "Have you participated in any evidence-based practice, quality improvement, or research projects after earning your DNP? Tell me about these projects"), and verbal and nonverbal probing techniques (Price, 2002; Spradley, 1979). While interviews followed the semi-structured guide, participants had the freedom to discuss their experiences naturally as relevant topics emerged. Upon completion of the interview guide, the interviewer closed by asking the participant if they had additional questions, comments, or recommendations and then summarized the interview by restating the participant's main ideas and opinions to ensure understanding. We collected demographic information via email following the interview. One interviewer (K.I., A.T., S.N., K.S., or B.C.) conducted each interview between November 2020 and July 2021. Interviewers observed redundancy, and no new information was forthcoming after nine interviews. We completed an additional two interviews to ensure data saturation.

Data Analysis

Audio recordings were transcribed verbatim and linked to de-identified demographic information using a unique pseudonym to enhance readability. Transcripts were imported into Dedoose version 7.0.23 (Socio Cultural Research Consultants, LLC, 2016), a cloud-based qualitative data analysis software. We used a content analysis approach, which involves no a priori codes, with the goal of allowing participants' narratives to emerge authentically (Sandelowski, 2000). Three reviewers (K.I., A.T., and B.C.) examined the data independently to identify categories and themes that produced a description of the participants' experiences. Two additional members of the research team (K.G. and C.F.) served as consultants during the coding process, which occurred between September 2021 and August 2022. The coders and consultants met monthly to discuss coded interviews and resolve any disagreements through discussion.

Results

Eleven DNPs from a range of specialties, including cardiology, geriatrics, neurology, oncology, palliative care, and surgery participated in the study. Purposeful sampling afforded diversity with respect to the clinical specialty, DNP instructional modality, years of experience in nursing, and time since DNP completion (Table 1). Participants had an average of 15 (range: 2–29) years of nursing experience and an average of 2 (range: 0–6) years of experience since completing their DNP degree. The sample was divided evenly with respect to DNP instructional modality, with approximately one-third each having completed their degree online, in-person, and

Table 1
Demographic Characteristics of Study Participants

Pseudonym	Years in Nursing	DNP Graduation Year	DNP Instructional Modality
Alex	N/A*	2019	N/A*
Brooke	7	2016	In-person
Casey	27	2019	Online
Devon	11	2020	In-person
Ely	2	2020	In-person
Frankie	14	2019	In-person
Gabby	17	2020	Hybrid
Hunter	29	2018	Online
Idris	6	2019	Hybrid
Jayden	20	2021	Hybrid
Kendall	15	2015	Online

Note. DNP, Doctor of Nursing Practice.
* Information not specified in the interview.

hybrid. Mirroring the diversity in the sample, the interviews reflected a broad spectrum of current roles and levels of engagement in evidence-based practice, quality improvement, or other types of translational research projects. Multiple themes emerged regarding the barriers, facilitators, and opportunities for DNP engagement in translational research.

Barriers

Our analysis revealed four distinct yet progressively related themes characterizing the barriers faced by DNPs wishing to engage in translational research in the clinical setting. As shown in Figure 1, the *invisibility of the DNP degree and skillset* (theme 1) leads to a *lack of role clarity and organizational structure for DNPs* (theme 2) because the DNP skillset and intended purpose are not fully understood within health systems. This results in a *lack of time for engagement in translational research* (theme 3) because there are few roles and structures that afford DNPs the opportunity and protected time to apply aspects of their doctoral training beyond direct patient care or administration. Consequently, DNPs face a *lack of support for engagement in translational research* (theme 4) because effort devoted to such projects is not viewed as part of their roles.

Theme 1. Invisibility of the DNP Degree and Skillset

Participants experienced that patients, colleagues, and health care organizations seemed unfamiliar with the DNP degree, its purpose, and its skillset. Casey stated, “I don’t know people know what DNP is or even appreciate DNPs. It’s just like another degree,” and several participants reported being asked, “What is a DNP?” Ely explained, “I include my credentials in most of what I do, but I, I

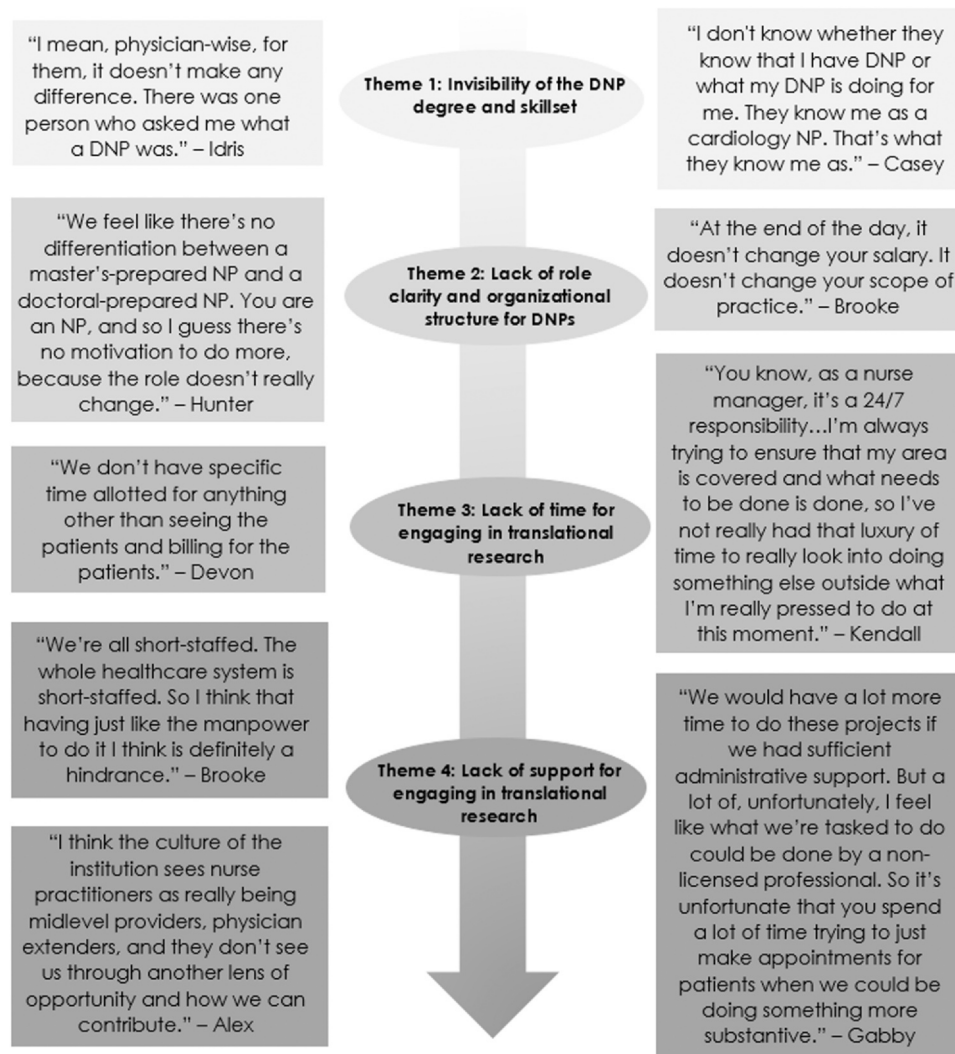


Figure 1. Thematic analysis of barriers to engaging in translational research among Doctor of Nursing Practice (DNP) prepared nurses working in a large academic health system. Despite having enthusiasm and training for engaging in translational research, DNPs ultimately faced a lack of support for these activities. Four discrete yet progressively connected barriers emerged from participants’ narratives.

Table 2
Exemplar Quotes From Thematic Analysis of Barriers, Facilitators, and Opportunities for Engaging in Translational Research Among DNP Prepared Nurses

Barriers

- Q1: The number one question that I always get asked now is like what am I going to do with my degree and what does it mean? And I'm honest, and I'm like, "Well, I don't know!" – Devon
- Q2: I don't think that they're familiar with the DNP to that level. When you tell a physician or most people in general that you have a doctorate, they think about the PhD. And so you have to explain to them what the difference with both degrees are. – Idris
- Q3: We need to have more visibility in terms of what we can do. I think that we have a lot of DNPs in the staff, but I don't think overall there is a clear understanding of what we can do and it's not conveyed easily in our day-by-day work. For instance, if you see me working doing my inpatient care or my outpatient care, perhaps you cannot see that, and I think people do not know what to expect from us. – Jayden
- Q4: There was no feedback from my colleagues that I would say were closer to me...from managerial staff—my manager, my director, all of whom I had close contact with—no one acknowledges, even though you're presenting them with a copy of your degree that you have earned, no one recognizes or acknowledges that. – Idris
- Q5: I met a few DNPs who told me they couldn't even have the DNP added to their badge. But I had to fight for that, and I got it! I went to security, and they told me, "No. That is not an approved abbreviation, so it's either NP or not." – Hunter
- Q6: I honestly believe that DNP-prepared nurses are not well utilized in a healthcare organization because they don't understand the role of a DNP-prepared nurse. And until they understand what the DNP-prepared nurse stands for and what they can do in an organization, I don't think that's going to change. – Kendall
- Q7: It's just the structural barrier, I would say. And it's not just in one place; it's not just in here. I have friends that have DNP as well that are in the same role as me. I think it's just health care as a whole. – Kendall
- Q8: They're looking for more of like a manager, now that I have my doctorate, which I thought was interesting, which makes me feel like leadership doesn't really know what a DNP does because they're looking for me to be like the NP manager and, like, do the schedule and do the hires and do, you know? – Devon
- Q9: I think that there are some practices and there are some departments that see their volume is high, they need the NP to just be seeing patients, and that's just how their role is designed. I think that...there's a delay in changing job descriptions, so my role here is a brand new position...it was created with the vision that a DNP would be in this position, so I think that there's not many positions that are designed for the flexibility of the doctorate. – Brooke
- Q10: The physicians I know are a different story, but the chaplain that works with our team also has a doctorate...she's not on clinical service all the time. She has protected academic time...she got funding for her role. She didn't have to go out and seek it. – Alex
- Q11: My chair told me, 'Well, if that's an interest for you, you need to come up with your own funding for your role because the way your role is funded right now is to be 100% clinical. So if you want protected time to do academic things, then you need to find your own funding for your role.' Which surprised me because I didn't think that anyone else was told to do that. – Alex
- Q12: Just that lack of response in itself is very demotivating, because you're like, "Oh, my God. Well, how do I know what's going on if no one will have a conversation with me and if no one will give feedback?" This was the number-one thing for me. The lack of response, or feedback, from anyone that I had reached out to. – Idris
- Q13: Because there was that lack of support, it ended up being sort of telling in and of itself. For a project like this to be effective, you really need the support and interest leadership sustained over a period of time, and that sort of ended up being my takeaway from the project. – Alex

Facilitators

- Q14: From an interpersonal standpoint, the facilitator is encouragement...I at least can speak to my team and that all of my colleagues—my physicians, my clinical research coordinators, my trials manager—have been remarkably supportive of any sort of endeavor that I would wish to engage in. So that is absolutely a facilitator to know that not only would they be encouraging, but that they would be able to offer hands-on support is huge. – Ely
- Q15: So the department, the higher authorities are definitely supportive about the QI and every project, and the management is very supportive. Because they want to see the numbers, they want to make sure that our department is the best...But colleagues? Zero...Because of the fact that they're short-staffed, right? They don't want to lose their NP. Because they definitely want, need a lot more people at the bedside with the patients. – Casey

Table 2 (continued)

Opportunities

- Q16: I'm able to deploy research into how we can better take care of our patients or help resolve those problems or keep our patients safe from developing pressure injury, from falling and things like that. But in a global aspect of being a doctorate-prepared nurse...of research and things like that, I've not been able to put into practice what I learn or what I know I can put into practice as a result of my degree. – Kendall
- Q17: I know exactly, because I worked as a nurse, right? So I know exactly how a patient feels, how to improve that outcome, or how to improve that patient's experience. Then I became an NP. Then I became a DNP. So all these years of experience...I can think what they're doing at the bedside at the very local level to the administration level. So I feel like we are not using our DNP people. We have to. – Casey

Note. DNP, Doctor of Nursing Practice; Q, quote.

don't know that they necessarily resonate with people." The lack of clear understanding about the purpose of the DNP is sometimes internalized by DNPs themselves (Quote 1 [Q1]; Table 2). Participants noted that even when patients and colleagues have heard of DNPs, they may not distinguish the role or skillset from PhDs (Q2). In addition, participants felt that neither colleagues nor organizations differentiated DNPs from master's prepared nurse practitioners with regard to skillset or potential for contributing to translational research (Q3). Several participants felt the invisibility of the DNP degree upon graduation when they shared news of their new training with colleagues and supervisors, and some felt that the value of the degree was not acknowledged (Q4). Additionally, many participants and their colleagues faced unclear and inconsistent practices with regard to listing DNP as part of their credentials on their ID badge (Q5).

Theme 2. Lack of Role Clarity and Organizational Structure for DNPs

Participants felt there were few defined roles that enabled DNPs to engage in translational research projects. Kendall described how the invisibility of DNPs, their skillsets, and potential contributions to health care organizations (theme 1) leads to a lack of role clarity and inhibits DNPs from practicing to the full scope of their educational preparation (Q6).

Several participants, including Kendall further reported that there are no formal roles for DNPs wishing to engage in translational research because health care institutions are not structurally prepared for DNP skill utilization, have not identified a clear role for DNPs, and may not fully understand DNPs' potential contributions (Q7).

Many participants indicated that their work roles had not changed after earning their DNP degrees, despite the additional skills afforded by doctoral versus master's level education. Hunter stated, "The job has not really changed, whether you have, you know, just NP or a DNP."

Others felt that the organization viewed nurse practitioners who earned DNPs as poised to be managers. This contrasted with DNPs' perceptions of their roles as clinical experts who could lead educational and translational research projects (Q8).

Participants voiced that the purpose of a DNP-prepared nurse was to translate research into practice and bring evidence-based practice to direct care to optimize patient outcomes and support clinical nurses. However, DNPs in this study felt that health care organizations viewed them solely as clinicians who were expected to practice hands-on patient care exclusively rather than as team members who could also lead and contribute to translational research activities. Devon stated that DNPs were "Always being told, you're 100% clinical...you have to be on service." Brooke further described the challenges of creating roles and job descriptions that are designed to capitalize on DNP skillsets (Q9).

Theme 3: Lack of Time for Engaging in Translational Research

Not having designated time for conducting translational research was the most commonly reported barrier among our sample. Participants described this barrier as a natural consequence of not having clear roles or organizational structures to support the integration of DNP skillsets (theme 2). DNPs reported being overwhelmed with direct patient care services, and the term “no protected time” appeared repeatedly throughout their narratives. Some participants reported that they had to work on translational research activities on their own unpaid time or not at all. Recalling one recent project, Frankie explained, “Often I would work on it outside of time and outside of paid hours, which becomes another, um, barrier.” DNPs also recognized that the allocation of protected time was different for them than for their interdisciplinary clinical colleagues (Q10). Participants felt that protected time is essential for carrying out translational research projects successfully. Alex noted, “I think, I mean, protected time is the greatest resource. I think that’s basically, that would’ve gone very far, or that would go very far, in thinking about being able to facilitate a project.”

Theme 4: Lack of Support for Engaging in Translational Research

DNPs reported having little support for engaging in translational research, which they viewed as stemming in part from the unavailability of protected time and requirements to keep up their patient volume and generate revenue from billed patient care (theme 4). Alex expressed frustration that her department would not support her pursuit of translational research (Q11).

Lack of enthusiasm or attention to project ideas from supervisors and colleagues was also interpreted by DNPs as a lack of support. Frankie described, “You might be really, really excited about a project, but if you can’t find somebody to support you in doing it, um, that can be difficult.” Similarly, Idris described a recent experience reaching out to leaders and supervisors with an idea for a project and not receiving many responses (Q12). Having previously experienced a lack of support discouraged DNPs from attempting future projects (Q13). Lastly, DNPs felt unsupported in conducting translational research due to a lack of precedent and examples of success. Hunter stated, “We lack role models, so we don’t know other DNPs and, who are perhaps, you know, leaders in the department.”

Facilitators

Encouragement from colleagues and supervisors emerged as the sole theme related to facilitators in the study data. Participants who felt supported in performing translational research underscored the importance of having the backing, emotionally and materially, of their immediate team (Q14). Highlighting the importance of interpersonal encouragement, Casey explained the experience of receiving mixed messages regarding support for such work (Q15).

Opportunities

Two themes characterizing opportunities for DNP involvement in translational research were identified in the data. The first theme, *DNP education promotes recognition of nurse role in translational research*, was elucidated from participant statements describing self-efficacy following their DNP education to engage in this work and an understanding of the importance of nurses being included as colleagues and leaders in translational research. Ely described the feeling of readiness to do this work if given the opportunity as, “Do I want to be engaging in more research and do I want to be, you know, um, pushing myself forward and do I feel like I have a good launchpad to do that from? Yes. Have I been able to? Not really.” Similarly, Kendall expressed confidence in their skills but felt there were missed opportunities to apply them in practice (Q16). Casey described feeling that the unique knowledge and experience of

nursing combined with the DNP skillset is currently an underutilized asset (Q17).

The second theme around opportunities, *DNPs are interested in role expansion to include translational research*, was identified from statements characterizing enthusiasm for taking on translational research while still having a primary role in clinical practice. Idris explained, “I feel like there should be more opportunities for us to contribute. Even for those of us who may not want to leave our current area, you know, where we work in. I mean, not all of us may want to leave that.” Casey noted, “Uh, I know there are two people in my department who are working as NPs who are looking for more.”

Discussion

The number of DNP graduates in the United States has grown and continues to grow at an exponential pace (AACN, 2020). This study is among the first to examine whether and how DNP graduates apply their doctoral skillsets in the clinical practice environment. Several factors contribute to the dearth of existing information on DNP contributions to clinical quality and safety and their roles in clinical settings. Chiefly, there is no formal mechanism for collecting these data through schools of nursing, employers, or professional organizations, and there are few professional certification credentials specific to the DNP (Carter & Jones, 2017; Mundinger & Carter, 2019). Without data collection, it is difficult to track career paths of DNP-prepared nurses. Furthermore, since the reframing of the DNP as a “practice-focused” doctorate, as opposed to a clinically-focused degree for APRNs, significant variability in program content has emerged. For example, Mundinger and Carter (2019) reported that DNP programs have shifted to such an extent that by 2018, only 15% of DNP programs had a clinical focus.

There is mixed evidence about the activities and roles of DNPs in clinical settings. In a web-based survey of 375 DNPs who had earned certification as providers of comprehensive care (a certification that is no longer active), participants reported spending 70% of their time delivering clinical care, 16% teaching, 2% consulting, and 2% conducting research (Carter & Jones, 2017). On the other hand, McCauley et al. (2020) noted that in 2018, 60% of DNP graduates opted for employment in schools of nursing rather than delivering clinical care. Beeber et al. (2019) conducted a survey of DNP program directors and interviewed employers of DNPs to understand the roles of DNPs in practice settings, concluding that DNPs in nonacademic settings function mostly as advanced practice nurses providing direct care or in leadership roles.

Our study revealed that DNPs working in direct patient care are interested in applying their doctoral skillset to conduct translational research but are limited in doing so by structural barriers within health care organizations. The experiences of DNPs working in clinical practice point to a disconnect between the intention and content of their educational programs and the functional role they play in the current health care landscape. DNPs felt their doctoral education prepared and motivated them to conduct translational research to improve patient care, but their roles upon graduation were unchanged from that of a master’s prepared, clinically-focused nurse practitioner. The results of this analysis suggest that health systems are missing an opportunity to capitalize on a growing, engaged, and skilled workforce with a high potential to improve quality outcomes—an irony, considering that the DNP was expanded in part to address this need.

Limitations and Strengths

This study has limitations, including recruitment from a single health system and a relatively small number of participants. While this may limit the generalizability of our findings, several participants did note their recent work experiences at other health

systems in the area and other regions of the country. Furthermore, we were able to recruit a diverse purposive sample with participants having a 27-year range of experience in nursing, a 6-year range in time from DNP completion, variation in DNP instructional modality, and practice in eight different specialties. Selection bias is another possible limitation, as DNPs who volunteered to participate in this study could have differed from non-participants with respect to their level of interest in or perception of barriers, facilitators, and opportunities related to conducting translational research. Lastly, while recruitment was open to DNPs working in any role, we were only able to recruit DNPs working clinically in direct patient care or direct supervisory roles. As such, we are not able to describe the experiences of DNPs who work in administrative roles beyond unit-level managers.

Implications

This study adds to a growing body of evidence demonstrating that DNPs are equipped with knowledge, experience, skills, and desire to advance the science and practice of nursing in ways that move beyond their roles as clinicians in direct patient care (Bowie et al., 2019). The demand for registered nurses and APRNs in direct patient care continues to grow as the country faces a severe contraction of the nursing workforce that is willing and able to serve in those capacities (Buerhaus, 2021). Our study found that DNPs wish to remain in clinical practice but feel that there is no avenue for them to utilize their skillsets for improving care at the system level through translational research while they serve in clinical roles. This suggests that health care organizations are missing an important opportunity to keep experienced and needed DNPs in clinical practice once they graduate and find no prospect for role expansion while working in direct patient care. Simultaneously, we are missing an opportunity to capitalize on the expertise DNPs bring to innovating patient care through translational research methods. Health care organizations should strongly consider adopting hybrid roles that allow DNPs to remain in direct patient care while affording adequate protected time to engage in translational research aimed at improving patient outcomes. Moreover, more research is needed to understand the impact of such work on patient outcomes, as well as the cost-effectiveness of hybrid roles, to establish whether there is a business case for offering such positions. Hybrid roles may be a strategy for retaining nurses in clinical practice as the profession faces an anticipated prolonged national workforce shortage.

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Keiko Iwama: Formal analysis, Writing – Original draft. *Arlene Travis*: Formal analysis, Writing – Original draft. *Sarah Nowlin*: Conceptualization, Methodology, Project administration. *Kimberly Souffront*: Conceptualization, Writing – Original draft. *Catherine Finlayson*: Validation, Supervision, Methodology. *Ksenia Gorbenko*: Validation, Supervision, Methodology. *Bevin Cohen*: Conceptualization, Writing – Review and editing, Supervision.

Declaration of Competing Interest

The authors have no competing interests.

Appendix. Semi-structured interview guide

Career trajectory

Please describe your career in nursing prior to earning your DNP. Please explain what motivated you to pursue your DNP.

DNP program and post-graduate experience

Tell me about your DNP program. (For example, track, specialization, concentration, etc.).

Did you consider any other DNP specialties or other advanced degrees? Tell me more.

Upon earning your DNP, did your roles, responsibilities, or titles change? Tell me more about this.

Would you like your role to change in the future? Tell me more.

Skillset

How do you think your DNP program prepared you to participate in evidence-based practice, quality improvement, and research projects?

In terms of preparing you for work as a DNP, what was missing from your program? What do you wish it gave you more of in terms of skills?

Did earning your DNP make you feel empowered to take an active role in evidence-based practice, quality improvement, and research projects? Tell me more about this.

Opportunities

Have you participated in any evidence-based practice, quality improvement, or research projects after earning your DNP? Tell me about these projects.

Tell me about the composition of the project team and how members of the team worked together.

Barriers

Were there any projects that you wanted to start or participate in but didn't? What stopped you?

From your perspective, are there any structural or personal barriers to conducting EBP and QI projects? (For example, barriers could include not feeling empowered to make change, not having time to conduct projects, not feeling support from supervisors, colleagues, or the institution, feeling that you may not have the right training or skillset, feeling that you do not know how to get the process started, etc.)

From your perspective, are there any structural or personal facilitators to conducting EBP and QI projects? (For example, facilitators could include feeling support from colleagues, supervisors, or the institution, feeling that resources are available to help with projects, feeling that others are willing to form partnerships, etc.)

Recommendations

In your opinion, what should the role(s) of DNP-prepared nurses be at this type of organization?

In your opinion, what cultural or structural changes would need to occur in order for this type of organization to best utilize the skillset of DNP-prepared nurses?

Please tell us anything else you would like us to know about your experience in the DNP role.

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