

Winston-Salem State University and Duke University's Bridge to the Doctorate Program

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To address the underrepresentation of ethnic minorities in research-focused nursing doctoral programs, Winston-Salem State University (WSSU) Division of Nursing has partnered with Duke University School of Nursing to establish a Bridge to the Doctorate program. This program provides a research honors track for graduate nursing students from underrepresented minority groups who are enrolled at WSSU, with the aim of preparing them to seamlessly transition into a PhD program at Duke University.

In a landmark report titled *The Future of Nursing: Leading Change, Advancing Health* [1], the Institute of Medicine of the National Academies in 2010 illuminated the need for the nation to double the number of nurses with doctoral degrees by 2020 and emphasized the importance of fostering diversity. Doubling the pool of nurses with doctorates is essential to ensure that there will be enough faculty to convey the skills, knowledge, and experiences that future nurses will need to pursue science and discovery, to provide high-quality care, and to manage a large population of patients in an increasingly complex, diverse, and technology-driven health care system [2]. To ensure that health research questions and interventions include issues that are culturally important for minority groups, education programs must also train researchers belonging to these groups [3].

Although nursing has made great strides in recruiting underrepresented racial and ethnic minority students into research-focused doctoral programs, the total number of minority nurse scientists is less than optimal. In 2012 individuals from ethnic and racial minority groups accounted for more than a third (37%) of the US population [4], a proportion that is expected to grow. Students from minority backgrounds currently account for 27.7% of enrollment in research-focused doctoral programs for nurses, but the minority population is increasing faster than the number of minority nurse scientists and faculty members [5].

Regardless of race or ethnicity, the standard route via which American nurses enter doctoral programs is by first obtaining a bachelor of science in nursing (BSN), then a master of science in nursing (MSN), and finally a PhD; typically there are significant time gaps between each program [6]. To meet the profession's need for more nurse faculty members and researchers, an alternative pathway has recently

become available with the advent of "fast-track" bachelor-to-doctoral degrees [7]. However, facilitating rapid progression from an MSN degree to a PhD remains challenging, particularly among underrepresented minority students. The median age of individuals who received nursing doctoral degrees in 1999 was 46.2 years, with a median of 15.9 years from when the student first enrolls in a graduate program to when he or she is awarded a doctorate in nursing; in comparison, the median time from first enrollment to a doctoral degree in other fields is 8.5 years [8].

The collaboration between Duke University School of Nursing (DUSON) and the MSN program at Winston-Salem State University Division of Nursing (WSSU-DON) hopes to change this situation. Together, WSSU and Duke University have established a Bridge to the Doctorate program, a research honors track designed to enable underrepresented minority students in the MSN program at WSSU-DON to seamlessly transition into a PhD program in nursing or other biomedical or behavioral disciplines at Duke University (<http://wssubridge2phd.nursing.duke.edu/>). Students in the program will complete their doctoral work at Duke within 6 years of beginning work on an MSN degree at WSSU.

WSSU, a constituent institution in the University of North Carolina system, is 1 of 108 historically black colleges and universities in the United States. WSSU has always had a mission of delivering high-quality education to diverse students. DUSON also has a commitment to increase diversity and inclusiveness in pedagogy, research, and the profession; the school aims to fulfill this commitment in part by broadening research questions and methodologies, particularly around the challenges of health disparities. The Bridge to the Doctorate program facilitates the education and research missions of both institutions.

Program Aims

Through a partnership between the DUSON and WSSU-DON faculties, the Bridge to the Doctorate program is

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implementing a 17-credit-hour research honors track in the MSN program at WSSU. The track consists of early and ongoing mentored research experiences, new and existing research courses, a year-long integrated intensive mentored research experience—including an intensive 8-week summer research internship at Duke University—and multiple mentoring and enhancement experiences.

The goal is to ensure that Bridge students are positioned to be highly competitive applicants for admission into biomedical or behavioral science PhD programs in nursing or related disciplines at Duke University. After Bridge students enroll in a PhD program, faculty members continue to provide mentoring, counseling, enrichment experiences, and tutoring as needed. The Bridge to the Doctorate program also strengthens the research environment of WSSU-DON through the development of enhanced MSN research courses, monthly research seminars, an enhanced annual research symposium, and ongoing mentored faculty development.

Key Program Components

The program is innovative because Bridge students have access to a vast network of research and academic resources and social supports throughout the 2-year MSN program, to prepare them for the critical transition into a PhD program. Students progress through a rigorous research honors track working alongside faculty mentors from both institutions. Students learn the research process as they interact with and learn from interdisciplinary scientists in the field and participate in formal research seminars, team discussions with mentors, and interdisciplinary research team meetings. During the summer, students have an opportunity to experience the academic environment and culture at Duke University during an 8-week intensive immersion experience, at which time they work with mentors, PhD course faculty members, and students who are currently enrolled in DUSON's PhD program.

The research honors track. The research honors track features early hands-on research experiences, a long-term relationship with a mentor for each student, and a number of required not-for-credit enhancement activities. Delivered concurrently with the MSN curriculum in the student's chosen nursing specialty, the research track is organized around 4 core components essential to research training: a strong scientific knowledge base, relevant research skills, enhanced communication skills, and appropriate leadership skills [9]. Classes cover graduate research methods, statistics, writing for publication, and research thesis coursework.

The integrated intensive research practicum. The research practicum is delivered through a combination of video-conferencing and face-to-face sessions. The practicum begins with an 8-week, 40-hours-per-week intensive research experience at Duke University facilitated by the primary research mentor from Duke and supported by the WSSU-DON research mentor. During the 8-week immersion experience, students actively engage with the interdisciplin-

ary research team of the primary mentor, learn details of the research project to which they are assigned, and develop an understanding of how a project is developed, implemented, and analyzed. The student assumes an active role in the execution of the mentor's research and participates in planning new research, grant writing, data collection, data entry, data cleaning, and data analysis. Bridge students also participate in a wide range of educational and social activities with DUSON PhD students, and they spend 1-3 days with each of several researchers in a variety of disciplines, research centers, and institutes across the campus in order to learn about different research methods.

Mentorship. Mentors are essential to the development of research scientists and play a pivotal role in the Bridge to the Doctorate program. In 2002, Byrne and Keefe [10] reported that the focus of nursing mentorship had changed over the preceding 3 decades. Earlier, mentoring had focused on executive leadership roles, whereas the current emphasis includes mentorships for expert clinicians, advanced practice nurses, and researchers. The Bridge program includes primary nurse faculty mentors from both DUSON and WSSU-DON who are scientists with diverse backgrounds and intellectual perspectives in nursing and other biomedical and behavioral sciences. Faculty mentors work collaboratively to provide academic, scientific, emotional, and informational support and to assist students as they acquire knowledge, develop research skills, enhance communication skills, and hone leadership skills. From their unique vantage points, faculty mentors can connect students with the wide range of resources available at each institution, giving students opportunities to collaborate with expert clinicians and research scientists and to work in state-of-the-art facilities.

Mentorship in an academic environment should improve the mentee's academic and research career, independent of intra-organizational hierarchy [11]. Primary investigators and administrators are working to develop faculty mentors and to model collegial research relationships that guide nursing mentees who are members of an ethnic minority group. The Bridge program works diligently to ensure that faculty members are actively engaged in the effective execution of the mentorship process through self-reflection, active team dialogue, and continuous evaluation.

Mentorship by student peers at WSSU-DON and by PhD students at Duke University is another important component of the program. Since the program began in summer 2013, Bridge students with clinical expertise from prior nursing experience have emerged as mentors for peers who have just completed their undergraduate education. Although peer mentoring is not a new model on college campuses [12], it usually occurs as a planned activity rather than emerging spontaneously. According to Noone [13], ethnic minority students may be more comfortable in learning environments where collaboration is emphasized over competition. Peer mentoring thus supports the success of the entire Bridge cohort.

The WSSU-Duke partnership is supportive of faculty mentors and their mentees. This partnership has strengthened the research environment, peer mentoring, collaboration, and clinical and research scholarship. These early advances in mentoring of ethnic minority students as they train to become nurse researchers are critically important if we are to address the complex relationships that exist among individual, interpersonal, institutional, social, and political factors that influence health outcomes.

Student research. Research guided by the primary mentors is the final component of the Bridge program. Students develop their research thesis during the first year of the program and continue to work on their research during the 8-week immersion experience and throughout the last year of their MSN coursework. Students receive institutional review board approval for their research, analyze the data, prepare their thesis, submit an abstract for presentation at a national research conference, and submit a manuscript for publication. The dissemination of their scholarship is essential to Bridge students' development as they transition into their PhD programs, and this research will position them well for admission to such programs.

Significance of the Program

Few members of underrepresented minorities hold doctorates or are enrolled in PhD programs in nursing or related biomedical and behavioral science programs [14, 15]. This number is not likely to increase much without significant intervention, and the Bridge to the Doctorate initiative is currently funding only 2 other nursing programs in the nation—one at the University of California, Los Angeles and one at the University of Illinois at Chicago [16]. Despite the distance between Duke University and WSSU, the 2 schools are taking a leadership role in addressing the serious disparity in nurses' access to doctoral education and providing an innovative model that other institutions can emulate. This collaborative partnership not only expands both institutions' capacity but also enriches the cultural and academic milieu by creating a pipeline through which underrepresented minorities are primed for transition to PhD programs in nursing and related scientific disciplines. This program also has the potential to influence the research agenda by broadening research questions and methodologies, particularly around the challenges of health disparities. *NCMJ*

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