Doctor of Nursing Practice Programs Across the United States: A Benchmark of Information. Part II: Admission Criteria

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The adoption of the doctor of nursing practice (DNP) degree by the American Association of Colleges of Nursing has led to the exponential growth of DNP programs across the United States. This article is Part II of a 2-part series exploring DNP program information. The purpose of this research was to create a benchmark of information that can be used to compare and contrast programs throughout the United States. Part I discussed DNP program characteristics. Part II consists of DNP admission criteria that include graduate record examination (GRE) requirements, grade point average (GPA), national certification, degree requirements, specialty foci, clinical hours, and prerequisite courses.

A cross-sectional, descriptive design was used to explore 137 DNP programs across the United States. Data were collected exclusively via university Web sites. Descriptive statistics were calculated and presented in report, table, or figure format.

As we move forward with the DNP, effective selection of students is of critical importance because admission and retention of outstanding candidates will ultimately strengthen the field of nursing. The data generated by this research provides programs with a starting point for discussion regarding admission criteria for the DNP degree. (Index words: DNP; Doctor of nursing practice; Admission criteria; DNP information) J Prof Nurs 28:274–283, 2012. © 2012 Elsevier Inc. All rights reserved.

THE ADOPTION OF the doctor of nursing practice (DNP) degree by the American Association of Colleges of Nursing (AACN) has led to the exponential growth of DNP programs across the United States. From 2005 to 2011, DNP programs have increased by 85%, with a 66% increase over the past 3-year period (Udlis & Mancuso, 2012). Enrollment numbers indicate that from 2008 to 2009, the number of students entering DNP programs increased from 3,415 to 5,165, and from 2009 to 2010, enrollment jumped to 7,034 with the number of DNP graduates increasing to 1,282 from 660 (AACN, 2010, 2011a). Rapid expansion and enrollment of students in DNP programs begs the question as to what are the attributes and requirements of such programs.

This article is Part II of a two-part series exploring DNP program information. The purpose of this research was to generate a database and create a benchmark of information that can be used to compare and contrast programs throughout the United States. Part I discussed DNP program characteristics that included type of program, delivery, plan of study, program length, number of credits, cost, practice course name, and a review of programs still offering the master's degree for the advanced practice nurse (APN) and a nursing education elective. Part II consists of DNP admission criteria that include graduate record examination (GRE) requirements, grade point average (GPA), national certification, degree requirements, specialty foci, clinical hours, and prerequisite courses. Understanding the overall characteristics and regional trends will help universities better plan for

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their specific needs when developing, amending, and evaluating their DNP programs. As we move forward with the DNP, effective selection of students is of critical importance because admission and retention of outstanding candidates will ultimately strengthen the field of nursing.

Background

As applicants for DNP programs proceed at a furious pace, it is crucial that the admission process be capable of assisting to select prospective students of the highest caliber to meet advancing health care demands. There is limited existing research on the graduate student selection process that indicates what will predict success (Creech & Aplin-Kalisz, 2011); however, a scant amount of literature was found within the nursing continuum. The GRE correlated with first-year and overall GPAs but was a weaker predictor of performance than undergraduate GPA (Rhodes, Bullough, & Fulton, 1994). On the contrary, Katz, Chow, Motzer, and Woods (2009) found that only 5% to 8% of the variance in cumulative GPA was explained by graduate students' GRE scores. Hansen and Pozehl (1995) found that nonnursing undergraduate GPA was the only significant predictor of clinical success in graduate nursing.

Other research indicated that there was no significant differences found among nonnurse college graduates, bachelor of science in nursing (BSN), and nurses with a nonnursing baccalaureate degree in a 2-year master's program on clinical or theoretical grades at the end of the first and second year of the program (Munro & Krauss, 1985). Further, for master's degree students, higher prerequisite statistics grades were not associated with higher research grades (Grace & D'Aoust, 2006). Without a substantial amount of evidence-based literature that indicates predictors of success among graduate nursing students, determining the appropriate admission criteria for DNP programs is even more of a challenge. A look at what current programs are using is a step in the right direction.

Methodology

Design

A cross-sectional, descriptive design was used.

Sample

DNP program listings were retrieved from the AACN DNP program Web site (AACN, 2011b). As of January 2011, AACN listed 136 DNP programs across the country. Of this list, 5 programs were not included because Web site information was not available at the time of data collection. An additional 6 DNP programs, found via Internet searches, were included into the sample resulting in a final sample size of 137 DNP programs.

Variables

Data collected from university Web sites were categorized by GRE requirements, GPA, national certification, degree requirements, specialty foci, clinical hour requirements, and prerequisite courses.

GRE Requirements. The GRE is a standardized test that is intended to measure an individual's reasoning skills, critical thinking, and ability to communicate effectively in writing. The categories for the GRE requirement were labeled as *yes*, *no*, *yes if GPA not met*, *yes if master of science in nursing (MSN) outside of the United States*, *yes if certified RN anesthetist*, *yes if not certified*, and *unclear*.

Grade Point Average. GPA is a quantitative measure of a student's academic achievement over a given period usually on a scale of 1.0 (*lowest*) to 4.0 (*highest*) that is calculated by dividing the grade points earned by the number of credits taken. This number was reported from the actual number listed on the Web site. When no actual number could be located, this variable was left blank.

National Certification. National certification is the professional certification obtained in advanced nursing practice roles such as APNs and sometimes nurse administrators (NAs) that indicates competency in the specified role. Schools either specified yes, no, preferred, recommended, or 1,000 hours in the past 3 years or certification. Other categories were unclear or not applicable.

Degree Requirements. Degree refers to the specified level of education, bachelor's or master's, that one must have completed to be eligible to apply for DNP admission. The degree may or may not be specified to be in the field of nursing. Classification for degree ranged from MSN, non-MSN, non-bachelor, and other bachelor's. Some Web sites were unclear regarding this requirement.

Specialty Foci. Specific to the MSN-to-DNP programs, specialty foci indicated the type of specialty or advanced practice focus required of the applicant. These were labeled as *APN*, *NA*, *any MSN*, *clinical nurse leader* (*CNL*), or *unclear*.

Clinical Hour Requirements. Clinical hours, the time spent in actual nursing practice, is the specified number of hours one must obtain prior to entering into the DNP program. For BSN-to-DNP programs, results were labeled *yes*, *no*, *unclear*, *preferred*, or *not applicable*. For the MSN-to-DNP program, results were listed as predetermined—a specified number of hours required; verification—verification of a specific amount of clinical hours from a prior program of study or the clinical setting; verification/predetermined—a set number of hours required in addition to some form of verification of previous clinical hours from a prior program of study or the clinical setting; predetermined/clinical experience—either predetermined and/or a specified amount of time in clinical practice after degree completion; and unclear—either unable to determine from the information given or not specified.

Prerequisite Courses. Prerequisite courses are the named courses or equivalent content that are required to be completed in a specified or nonspecified period for entrance into the DNP program. Prerequisite courses identified on Web sites were listed for both BSN/MSN-to-DNP programs and labeled with a specified time frame if indicated.

Data Collection Procedure

All data were collected exclusively via the university's Web pages. No information was obtained from telephone communication or written correspondence. This method was deemed exempt by two university institutional review boards. The 137 schools were divided equally among both investigators who collected the data via the Web sites over a 6-month period from July 2010 to January 2011. Thirty-five schools were randomly selected and checked to ensure data accuracy. The few inaccuracies (n = 3) were rectified.

Data Analysis

Data analysis was completed using PASW Statistics 18 (SPSS 18) Descriptive statistics including frequencies, percentages, means, and standard deviations were calculated for admission criteria variables and presented in report, table, or figure format.

Results

The use of the GRE as an admission requirement in BSN-to-DNP programs across all regions was equally split, with 43.3% requiring the GRE and 43.3% not. An additional 13.3% of programs (including all regions, with the exception of the southwest) required the GRE if a predetermined GPA was not met. In MSN-to-DNP programs, the GRE was not as frequently required, with 67.6% of programs not listing the GRE in their admission criteria. The west region did not have any programs that required the GRE. Few programs (<3.5%) in the midwest, northeast, and southeast required the GRE if criteria, other than GPA, were not met (e.g., lack of national certification). See Table 1.

The overall average GPA required of BSN-to-DNP applicants was 3.09 ± 0.19, and this was grossly consistent across all regions, with only slight variation in the northeast, where an average GPA of 3.2 ± 0.23 was necessary. A somewhat higher average GPA was needed for the MSN-to-DNP applicant (3.17 ± 0.20). This was also consistent across all regions with extremely small variability.

Most MSN-to-DNP programs required national certification of APN applicants (66.4%). Approximately 2.2% of programs preferred APNs to have national certification, whereas less than 1% required 1,000 practice hours in the previous 3 years if the applicant lacked national certification. Figure 1 displays the regional differences in APN national certification requirements. Figure 2 shows the variation in NA national certification requirements across the country. Overall, this certification was not required in 70.2% of programs who admitted NAs, whereas it was recommended in 3.2% and required in 13.8%. This information was unclear in 12.8% of the programs surveyed.

Table 2 presents the degree requirements for both BSN and MSN-to-DNP programs. Although most (81.7%) BSN-to-DNP programs required that applicants have a BSN degree, 16.7% will accept an RN with another bachelor's degree. Degree requirements at the MSN-to-DNP level accommodated a more diverse entry to a DNP degree; however, the MSN remained the degree most commonly required either alone or in combination with a specialty area. Entry to the DNP with a non-MSN master's degree was available in a few programs, albeit the applicant usually had to possess an RN or BSN or have a master's degree in a related field.

Admission specialty foci were specific to the MSN-to-DNP programs and classified the type of specialty or advanced practice focus required of the applicant. Overall, 42.6% of programs did not require a specific specialty focus from their applicants. However, specialty as an APN was the most widespread required specialty area in 56% of programs. NA specialty foci were commonly required (22.1%), whereas other specialties such as public health NA and CNL were less common but required in several programs. See Table 3 for further details.

Table 1. Graduate Record Examination

	Region					
GRE	**All regions** f (%)	**Midwest** f (%)	**Northeast** f (%)	**Southeast** f (%)	**Southwest** f (%)	**West** f (%)
BSN to DNP						
Yes	26 (43.3)	9 (37.5)	5 (45.5)	8 (57.1)	2 (66.7)	2 (25.0)
No	26 (43.3)	12 (50.0)	4 (36.4)	5 (35.7)	1 (33.3)	4 (50.0)
Yes if GPA not met	8 (13.3)	3 (12.5)	2 (18.2)	1 (7.1)	0 (0.0)	2 (25.0)
Total	60	24	11	14	3	8
MSN to DNP						
Yes	30 (22.1)	6 (13.6)	11 (29.7)	12 (38.7)	1 (11.1)	0 (0.0)
No	92 (67.6)	32 (72.7)	22 (59.5)	16 (51.6)	7 (77.8)	15 (100.0)
Yes if GPA not met	8 (5.9)	3 (6.8)	3 (8.1)	1 (3.2)	1 (11.1)	0 (0.0)
Yes if MSN outside the United States	2 (1.5)	1 (2.3)	1 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)
Yes if CRNA	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Yes if not certified	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Unclear	2 (1.5)	2 (4.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	136	44	37	31	9	15

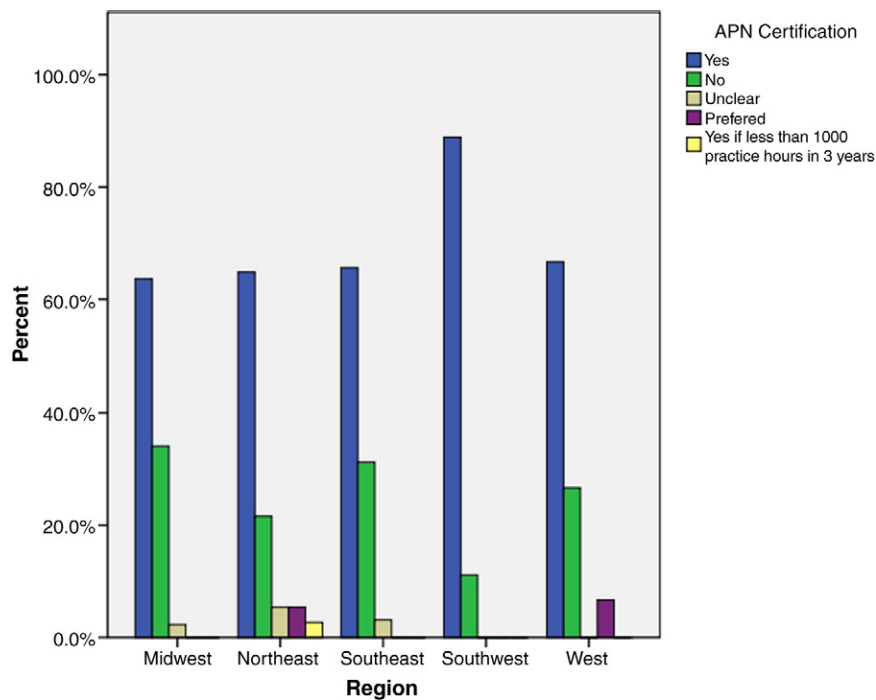Note. f = frequency; CRNA = certified RN anesthetist.

Figure 1. APN certification requirement.

Three quarters (75%) of BSN-to-DNP programs did not require any previous clinical experience or documentation of clinical hours from their applicants. This trend was consistent across the regions (Table 4). Most MSN-to-DNP programs (69.1%) included a predetermined number of clinical hours within their curricula regardless of previous clinical hours acquired during a master's program. Of that 69.1% of programs, 31.6% not only required that students completed a predetermined number of clinical hours before DNP graduation but also required that applicants verified that they completed a specific number of clinical hours during their previous graduate education (most citing at least 500 clinical hours). However, determining the need or quantity of clinical hours required in MSN-to-DNP programs was unclear in 25% of those surveyed. Table 4 displays the regional differences across programs.
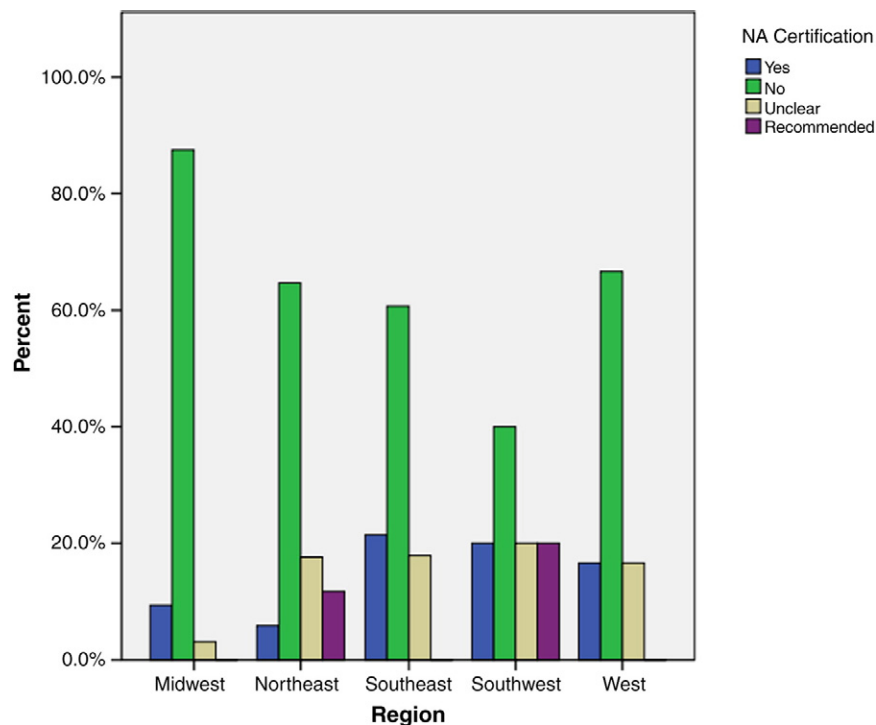

Figure 2. NA certification requirement.

Table 2. Degree Requirements

	Region					
Degree	All regions f (%)	Midwest f (%)	Northeast f (%)	Southeast f (%)	Southwest f (%)	West f (%)
BSN to DNP						
BSN	49 (81.7)	20 (83.3)	8 (72.7)	12 (85.7)	2 (66.7)	7 (87.5)
BSN or other bachelor's with RN	10 (16.7)	4 (16.7)	2 (18.2)	2 (14.3)	1 (33.3)	1 (12.5)
BSN or RN	1 (1.7)	0 (0.0)	1 (9.1)	0 (0.0)	0 (0.0)	0 (0.0)
Total	60	24	11	14	3	8
MSN to DNP						
MSN only	72 (52.9)	27 (61.4)	15 (40.5)	18 (58.1)	4 (44.4)	8 (53.3)
Master's with APN	37 (27.2)	7 (15.9)	13 (35.1)	9 (29)	4 (44.4)	4 (26.7)
BSN or MSN	9 (6.6)	3 (6.8)	5 (13.5)	1 (3.2)	0 (0.0)	0 (0.0)
MSN/non-MSN-related field	5 (3.7)	3 (6.8)	1 (2.7)	1 (3.2)	0 (0.0)	0 (0.0)
MSN or master's or BSN with non-MSN master's	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.7)
BSN or MSN or non-MSN	2 (1.5)	0 (0.0)	2 (5.4)	0 (0.0)	0 (0.0)	0 (0.0)
RN with any bachelor's or master's	4 (2.9)	0 (0.0)	0 (0.0)	2 (6.5)	1 (11.1)	1 (6.7)
MSN with APN or NA	1 (0.7)	1 (2.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Unclear	5 (3.7)	3 (6.8)	1 (2.7)	0 (0.0)	0 (0.0)	1 (6.7)
Total	136	44	37	31	9	15

Note. f = frequency.

Overall, 56.7% of BSN-to-DNP programs required specified prerequisite courses for admission. Figure 3 displays the regional differences in prerequisite BSN courses. No BSN-to-DNP programs surveyed in the southwest region were found to require prerequisite BSN courses, whereas only 35.7% in the southeast region had this requirement of their applicants. The midwest, northeast, and west regions all have a higher percentage of programs requiring prerequisite courses than not. Figure 4 displays a similar trend in prerequisite course requirements across the regions for MSN-to-DNP programs, with the exception of the west region, where most programs (53.3%) do not have any prerequisite course requirements. Yet overall, a slight majority (52.2%) of MSN-to-DNP programs across the country list necessary prerequisite courses applicants must have to be eligible for their DNP program.

Table 5 lists the courses in rank order across regions and regional variations of courses that were listed as prerequisites to the BSN-to-DNP programs surveyed. More than half (51.7%) of BSN-to-DNP programs required an undergraduate statistics course, 15% required an undergraduate health assessment course, and 13.3% required an undergraduate research course. Although some minor deviations were noted, statistics, health assessment, and research, typically in that order, were noted to be the top three prerequisite courses in the BSN-to-DNP programs.

Prerequisite courses in the MSN-to-DNP programs were more diverse, with specific time requirements attached to a number of courses. Similar to the BSN-to-DNP programs, statistics, research, and health assessment were the top three most commonly cited prerequisite course in the MSN-to-DNP programs overall. Most programs required applicants to have taken these graduate-level courses anytime in the past; however, some programs limited the acceptable time range to within 3 to 5 years or within 5 years. Table 6 lists the

Table 3. Admission Specialty Foci

	Region					
Foci	All regions f (%)	Midwest f (%)	Northeast f (%)	Southeast f (%)	Southwest f (%)	West f (%)
MSN to DNP						
APN	44 (32.4)	10 (22.7)	14 (37.8)	10 (32.3)	5 (55.6)	5 (33.3)
APN/NA	27 (19.9)	7 (15.9)	5 (13.5)	9 (29.0)	4 (44.4)	2 (13.3)
APN/NA/PHNA	3 (2.2)	0 (0.0)	0 (0.0)	3 (9.7)	0 (0.0)	0 (0.0)
Any MSN	58 (42.6)	26 (59.1)	17 (45.9)	9 (29.0)	0 (0.0)	6 (40.0)
Any MSN with APN/CNL	2 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (13.3)
Unclear	2 (1.5)	1 (2.3)	1 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)
Total	136	44	37	31	9	15

Note. f = frequency; PHNA = public health NA.

Table 4. Clinical Hours

|	Region					
	All regions	Midwest	Northeast	Southeast	Southwest	West
Clinical hours	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
BSN to DNP						
Yes	12 (20.0)	4 (16.7)	3 (27.3)	3 (21.4)	0 (0.0)	2 (25.0)
No	45 (75.0)	19 (79.2)	8 (72.7)	10 (71.4)	2 (66.7)	6 (75.0)
Unclear	1 (1.7)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Preferred	2 (3.3)	0 (0.0)	0 (0.0)	1 (7.1)	1 (33.3)	0 (0.0)
Total	60	24	11	14	3	8
MSN to DNP						
Predetermined	38 (27.9)	14 (31.8)	6 (16.2)	10 (32.3)	4 (44.4)	4 (26.7)
Verification	8 (5.9)	2 (4.5)	3 (8.1)	1 (3.2)	1 (11.1)	1 (6.7)
Predetermined/Verification	43 (31.6)	15 (34.1)	7 (18.9)	15 (48.4)	2 (22.2)	4 (26.7)
Predetermined/Clinical experience	13 (9.6)	4 (9.1)	5 (13.5)	1 (3.2)	1 (11.1)	2 (13.3)
Unclear	34 (25.0)	9 (20.5)	16 (43.2)	4 (12.9)	1 (11.1)	4 (26.7)
Total	136	44	37	31	9	15

Note. f = frequency.

variety of prerequisite courses for MSN-to-DNP programs across the regions.

Discussion

With the volume of work necessary to plan and implement a DNP program, curriculum and resource planning may certainly trump a review and critical appraisal of admission criteria. Although a comparison of MSN and DNP admission criteria was not the aim of this research, the question should be posed: "Does a different degree require different admission criteria?" Although AACN and other sources provide some guidance regarding admission requirements (i.e., degree and specialty foci), one must evaluate the literature to discern that all aspects of program transformation to the DNP, including program admission requirements, remain congruent with AACN recommendations and are evidence based.

The use of the GRE as a predictor of success in graduate nursing programs has long been debated. Stein (1978) advocated for methods other than the GRE to evaluate prospective graduate nursing students. Over 30 years later, Katz et al. (2009) concurred with Stein and reported that the GRE created an obstacle to graduate school application that overshadowed the small benefits
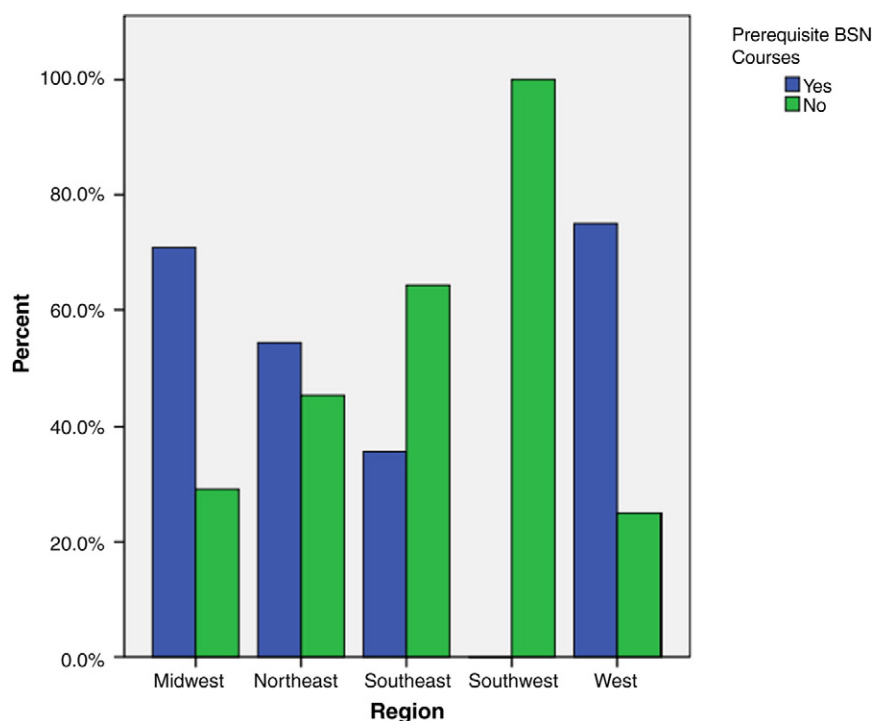
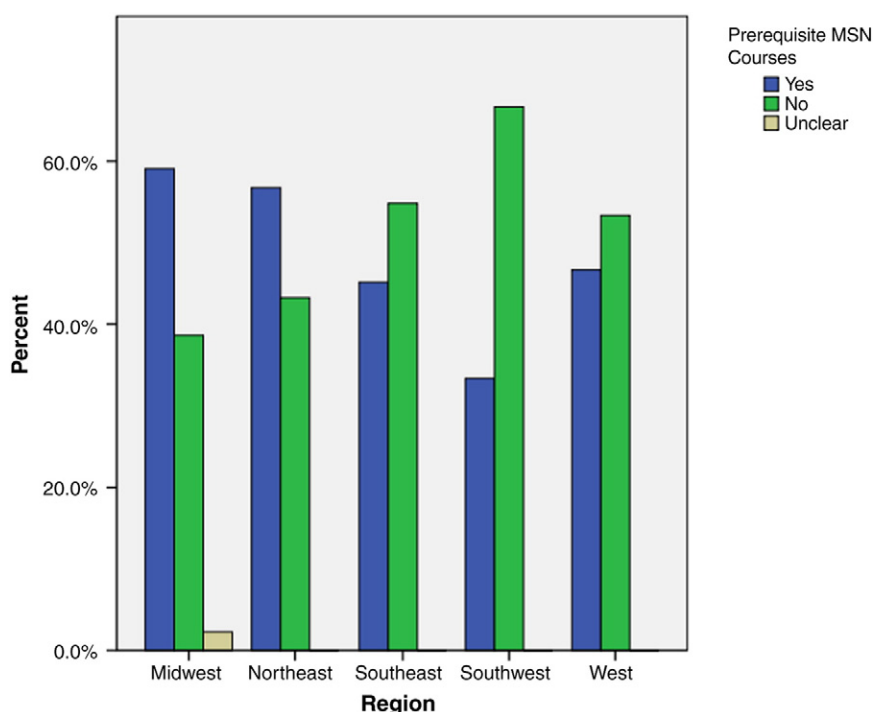**Figure 3**. Prerequisite BSN courses.

Figure 4. Prerequisite MSN courses.

derived from its use. The GRE has also been found to be a weaker predictor of success in graduate nursing beyond the use of undergraduate GPA (Newton & Moore, 2007; Rhodes et al., 1994; Suhayda, Hicks, & Fogg, 2008). Even when specifically examining nursing doctor of philosophy programs, the GRE lacked predictive validity and internal reliability (Megginson, 2011). With more than half (56.6%) of all BSN-to-DNP programs using the GRE in some capacity (either alone or if certain other criteria were not met), programs should scrutinize their use of the GRE and what outcomes they are attempting to achieve with its use.

GPA has been a long-standing admission criterion in most all programs across most all disciplines and has been found to be a valid predictor of success (Burns, 2011; Suhayda et al., 2008). DNP programs across the country have appeared to uniformly adopt an average undergrad-uate GPA of 3.09 ± 0.19 for BSN-to-DNP programs and 3.17 ± 0.20 for MSN-to-DNP programs with very little differences across regions.

Two thirds (66.4%) of MSN-to-DNP programs required APN applicants to possess national certification as part of their admission criteria. A hallmark of DNP education is to prepare graduates and ensure their eligibility to sit for national, advanced specialty certification (AACN, 2006a). Taking into consideration that 72.1% of MSN-to-DNP programs offered the "traditional" DNP degree, where no specific specialty preparation beyond the DNP Essentials are offered (Udlis & Mancuso, 2012), applicants would have needed to attain this specialty education in their prior graduate education to meet AACN's recommendation. However, most (70.2%) MSN-to-DNP programs do not require the same advanced specialty certification of their NA applicants (Udlis & Mancuso, 2012). National

Table 5. BSN-to-DNP Prerequisite Courses

	Region					
	All regions	**Midwest**	**Northeast**	**Southeast**	**Southwest**	**West**
Course	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
Statistics	31 (51.7)	15 (62.5)	6 (54.5)	5 (35.7)	0 (0.0)	5 (62.5)
Health assessment	9 (15.0)	6 (25.0)	1 (9.1)	2 (14.3)	0 (0.0)	0 (0.0)
Research	8 (13.3)	4 (16.7)	1 (9.1)	1 (7.1)	0 (0.0)	2 (25.0)
Physiology	2 (3.3)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (12.5)
Pharmacology	1 (1.7)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Microbiology	1 (1.7)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Pathophysiology	1 (1.7)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Chemistry	1 (1.7)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Community nursing	1 (1.7)	0 (0.0)	0 (0.0)	1 (7.1)	0 (0.0)	0 (0.0)

Note. f = frequency.

Table 6. MSN-to-DNP Prerequisite Courses

	Region					
	All regions	**Midwest**	**Northeast**	**Southeast**	**Southwest**	**West**
Course	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
Statistics						
Anytime	27 (19.9)	8 (18.2)	8 (21.6)	4 (12.9)	2 (22.2)	5 (33.3)
Within 3–5 years	24 (17.6)	11 (25.0)	7 (18.9)	4 (12.9)	1 (11.1)	1 (6.7)
Within 10 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Research						
Anytime	19 (14.0)	7 (15.9)	4 (10.8)	4 (12.9)	1 (11.1)	3 (20.0)
Within 3–5 years	5 (3.7)	0 (0.0)	3 (8.1)	1 (3.2)	1 (11.1)	0 (0.0)
Health assessment						
Anytime	19 (14.0)	5 (11.4)	8 (21.6)	4 (12.9)	0 (0.0)	2 (13.3)
Within 3–5 years	2 (1.4)	0 (0.0)	0 (0.0)	2 (6.4)	0 (0.0)	0 (0.0)
Pharmacology						
Anytime	14 (10.3)	2 (4.5)	6 (16.2)	4 (12.9)	0 (0.0)	2 (13.3)
Within 3–5 years	2 (1.4)	0 (0.0)	0 (0.0)	2 (6.4)	0 (0.0)	0 (0.0)
Physiology						
Anytime	9 (6.6)	1 (2.3)	5 (13.5)	1 (3.2)	0 (0.0)	2 (13.3)
Within 3–5 years	2 (1.4)	0 (0.0)	0 (0.0)	2 (6.4)	0 (0.0)	0 (0.0)
Nursing theory						
Anytime	7 (5.1)	1 (2.3)	2 (5.4)	1 (3.2)	0 (0.0)	3 (20.0)
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Pathophysiology						
Anytime	6 (4.4)	1 (2.3)	1 (2.7)	4 (12.9)	0 (0.0)	(0.0)
Within 5 year	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	(0.0)
Epidemiology						
Anytime	5 (3.7)	2 (4.5)	0 (0.0)	2 (6.5)	0 (0.0)	1 (6.7)
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Health policy						
Anytime	3 (2.2)	0 (0.0)	2 (5.4)	0 (0.0)	0 (0.0)	1 (6.7)
Microbiology						
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0(0.0)	0 (0.0)
Nutrition						
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Psychology						
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Sociology						
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
English						
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Ethics						
Anytime	1 (0.7)	1 (2.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Within 5 years	1 (0.7)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)
Chemistry						
Anytime	1 (0.7)	1 (2.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Note. f = frequency.

certification as a NA is not linked to licensure, as it is with most APNs, and thus may not be regarded as necessary in the NA environment. However, the competencies of DNP education must be met, and programs that admit NAs without national certification must ensure that their graduates are prepared and eligible for this specialty certification upon graduation.

The baccalaureate or advanced generalist master's degree in nursing is the foundation upon which the BSN-to-DNP and MSN-to-DNP curriculum is built upon with AACN-endorsed *Essentials of Baccalaureate Education* and *Essentials of Master's Education* providing the

structure and competencies for the BSN and MSN degrees, respectively. Ensuring that students maintain a strong liberal arts background also has been recommended (Clinton & Sperhac, 2006).

Along with this, AACN has advocated for multiple points of entry to the DNP with the caveat that all graduates meet end-of-program competencies (AACN, 2006b). Given this, programs are able to use a variety of degree entrance criteria and formulate curricula to meet the needs of individual students. Most DNP programs require that applicants have either a BSN or an MSN degree to be considered for admission, with some programs offering non-MSN and non-

BSN points of entry. DNP programs must stay cognizant to the education needs of nonnursing degree students and ensure that DNP competencies are being met.

With the recommendation that the four APN roles (clinical nurse specialists, nurse anesthetists, nurse midwives, and nurse practitioners) transition educational preparation to the DNP by 2015 (AACN, 2004), this group was assumed to be the first wave of DNP graduates (Clinton & Sperhac, 2006). Indeed, the APN specialty track is offered in most DNP programs across the nation (Udlis & Mancuso, 2012). Consistent with this trend, 56% of MSN-to-DNP programs required that applicants possess an APN specialty, thereby assisting master's-level APNs to meet AACN's DNP degree recommendations. In addition, with 22.5% of DNP programs specifically seeking the NA specialty foci for admission, NAs are provided with the opportunity to expand their knowledge and skills to the doctoral level in the field of nursing. With nearly half (42.6%) of all DNP programs requiring any MSN degree, the DNP appears to be accessible to all MSN foci areas.

The pros and cons of requiring previous clinical experience prior to admission to APN programs have been debated in the literature (Conway-Welch, 2002; Worthington, 2002), with both sides citing compelling arguments. With 75% of BSN-to-DNP programs not citing any specific prerequisite clinical experience or documentation of clinical hours, nursing programs appear to be moving away from the more traditional experience-required viewpoint. The mandated minimum 1,000 hours of postbaccalaureate practice hours in the DNP may be partially responsible for this shift.

With many MSN students (particularly APN graduates) entering programs with documented clinical hours, some even exceeding the 1,000 mandated postbaccalaureate DNP hours, questions arise as to how to document, verify, and/or require DNP-level clinical hours. It is thought that these MSN students will enter DNP programs with sufficient practice experience (Lenz, 2005); however, that cannot be assumed. Once again, AACN advocates for the use of practice experiences to meet the DNP end-of-program competencies and the *Essentials* (AACN, 2006b). Nearly 70% of MSN-to-DNP programs required a predetermined number of clinical hours to graduate, with 37.5% of those programs also requiring verification of a minimum number of master's-level clinical hours. How clinical hours were spent in each DNP program was not recorded; however, programs appeared to have varying methods by which the 1,000 mandated DNP clinical hours were documented and met.

Clinton and Sperhac (2006) highlighted the idea that the knowledge and skills that DNP students have when entering their programs will impact their level of mastery upon graduation. Along with degree, specialty foci, and previous experience, the number and types of previous coursework also contribute to this knowledge and skills. More than half (56.7%) of BSN-to-DNP programs required specific prerequisite courses of their applicants, with statistics being the most common prerequisite

(51.7%) followed by health assessment (15%) and research (13.3%). The MSN-to-DNP programs surveyed were quite similar, with 52.2% requiring prerequisite courses, the top three being statistics, research, and health assessment, in that order.

With the focus on practice and less on research methodology and statistics (AACN, 2006b), it is interesting that statistics and research continue to be regarded as necessary prerequisite knowledge to be successful in DNP programs. A supposition may be that the charge of the DNP to expand scientific knowledge, to positively impact patient care delivery methods and outcomes, and to require the completion of a scholarly, doctoral-level, DNP project (AACN, 2006b) is believed to necessitate a certain amount of knowledge relating to statistics and research methods. Interestingly, a study conducted by Grace and D'Aoust (2006) found that the inclusion of statistics as a prerequisite course did not impact success in graduate research courses and could not support its value as a program requirement.

Although courses including physiology, pharmacology, and pathophysiology were also cited, albeit less commonly, as prerequisite courses, it would be interesting to monitor the trend as to what knowledge and skills will be valued in our DNP applicants, students, and graduates in the future. Furthermore, with the anecdotal evidence of the need to improve writing skills in DNP students, universities may want to consider prerequisites that assist in determining baseline writing competencies and develop curriculum to cultivate writing skills throughout the program.

By using this type of data collection method, the authors made a serendipitous finding regarding the importance of having a logically organized, user-friendly Web site. A striking finding was the difficulty of extracting the data from the Web pages and the time it took to review each program to find the predetermined program characteristics. It is assumed that characteristics such as type of program, program of study, delivery method, length, credits, admission requirements, and cost are important information potential students would seek from a Web site and that this information should be readily available and easily accessible. Although some Web sites provided excellent access to these types of information, most required extensive searching and multiple URL redirections. Because many students start their exploration of graduate programs by using the Internet and program Web sites (Clinton & Sperhac, 2006), universities should ensure that their Web site provides not only accurate but also easily accessible information.

Limitations

A limitation to these findings was that data were collected exclusively via university Web sites, and therefore, any information that may have been conveyed by other means (e-mailing for further information or directly contacting the university) was not gathered. Another limitation may be the accuracy of the information collected. Therefore,

this database may over- or underrepresent the facts. All efforts were made by the authors to ensure accuracy of the data and to not make assumptions with the information provided on the Web sites, but rather to deem information unclear or overtly missing.

Conclusions

The transition to the DNP degree from the master's level for ANP specialties requires students to have the capacity to succeed in programs with higher credit requirements, longer program lengths, and greater academic expectations. Recruitment and retention of highly qualified applicants to DNP programs will be a vital component to ensuring that students matriculate and graduate, thereby reducing program attrition. Much has been written about undergraduate nursing program predictors of success, yet few articles discuss the attributes necessary for success at the graduate level, much less at the doctoral level. The data generated by this research provide programs with a starting point for discussion regarding admission criteria for the DNP degree.

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