A Modified Decision Making e-Delphi Study of Canadian Schools of Nursing Academic Leaders' Perceptions of the Doctor of Nursing Practice (DNP) Degree as Educational Preparation for Nursing Faculty

Elijah John Ahlquist (✉ ela29988@bethel.edu)

Saskatchewan Polytechnic - Regina Campus   https://orcid.org/0000-0001-9839-5482

Pammla Petrucka

University of Saskatchewan College of Nursing

Sandra Bassendowski

University of Saskatchewan

Diane Dahl

Bethel University

Research note

Abstract

Objective

A shortage of doctorally prepared nursing educators is a significant challenge for Canadian undergraduate nursing education. Given the propensity for Canadian nurses to pursue doctoral education in the United States of America (USA), coupled with the extant nursing faculty shortages, the emergence of the American Doctor of Nursing Practice (DNP) degree is a potential alternative to the traditional PhD degree. The aim of this modified e-Delphi study is to explore perceptions of this degree as educational preparation for a faculty role. To this end, the research questions explore the key attributes in the selection of nursing faculty, the impact of tenure and promotion on faculty possessing practice-based terminal degrees, and the potential academic role for DNP-prepared faculty within the Canadian context.

Results

The findings suggest that research ability is an essential attribute for a faculty role, especially in a university setting, because of the emphasis placed on it within systems of tenure. An unexpected finding is the desire to recognize alternate forms of scholarship within systems of tenure. The participants also expressed that DNP-prepared faculty are suited to teaching track positions. On this basis, further research should be undertaken to expand on the findings of this exploratory study.

Introduction

A shortage of doctorally prepared nursing educators is a significant challenge for Canadian schools of nursing. Canadian schools projected a need to hire 243 full-time faculty in 2016 [1], which is a significant shortfall of nursing educators.

The emergence of the Doctor of Nursing Practice (DNP) degree has exploded in popularity making it the preferred choice for nurses in the USA [2,3]. While many countries have well established practice doctorates in nursing [4,5], Canada has not embraced this phenomenon. Furthermore, it is common for Canadian students to pursue doctorates abroad (i.e. USA) [1,6] and given proximity, it is only a matter of time before DNP prepared nurses return to Canada seeking positions as faculty.

The data presented in this manuscript comes from a 2019 doctoral dissertation. The intent was to explore the perceptions and reasoning of academic leaders' (deans, program directors, etc.) regarding the DNP-degree as educational preparation for nursing faculty in Canadian undergraduate nursing programs. The data was collected over a period of approximately six months through three rounds of iterative questionnaires.

Main Text

Methodology

To conduct this study a modified e-Delphi technique was utilized to develop consensus regarding the potential academic roles for DNP-prepared nursing faculty within the Canadian context. Through this method the key attributes for nursing faculty were elicited, and compared with academic structures such as tenure and promotion to determine their impact on the hiring, utilization, and/or appointment of nursing faculty possessing practice-based terminal degrees in Canadian schools of nursing.

Data Collection/Analysis

This study was distributed electronically to academic leaders representing undergraduate nursing programs in Canada. Content validity of the initial questionnaire was supported by a basis in the literature. As such, a review of the literature occurred to identify themes to be explored in the Canadian context. Based on these, an initial survey instrument was developed. This questionnaire was piloted until saturation and revised prior to distribution to the participants.

Demographic information was collected to define the characteristics of the respondents and to analyze the group's response patterns as consensus emerged through the successive rounds.

A series of questions required the participants to indicate their agreement using a non-linear scale which represented a continuum, rather than distinct levels [7,8]. Questionnaire responses were analyzed using descriptive statistics (distribution, central tendency, and dispersion) and were reflected as simple graphics and basic tables to inform the participants of the basic features of the group's response patterns from the preceding round. A visual representation of the group's responses was provided for each question along with the anonymous rationales provided by other participants. Providing this information enabled participants to review and reflect on their personal rationale, in light of the comments by others, ideally revising their response towards a consensus—which was consistent with the Delphi method [9].

The analysis of all qualitative data used a conventional content analysis technique to describe the phenomenon of utilizing DNP-prepared nursing faculty in the Canadian context.

Discussion

RQ1. Attributes

A key attribute in the selection of nursing faculty, which was identified throughout all three rounds of this study, was research capacity. This finding was clearly reflected by the responses to the forced-choice questions where the PhD-prepared candidate option was nearly exclusively selected. Furthermore, qualitative evidence regarding the participants' rationales suggests that research ability is a key consideration in the hiring of nursing faculty. The respondents' collective perception that DNP-prepared nursing faculty were lacking in this key attribute was identified as a barrier to their potential integration.

This finding was further supported by a statistical analysis of participant's demographic characteristics related to responses. Based on the demographic characteristics collected, participant's educational

preparation revealed a pattern of preference in the hiring scenarios. Amongst PhD prepared participants, the PhD faculty profile was preferred, 84% of time, for all hiring scenarios. No other demographic characteristics were significantly associated with scenario selection patterns. During round two inter-rater agreement was questionable due to the small sample size. However, as few participants changed their selection the Kappa values in round one (0.16 [95% CI = −0.06 to 0.38]) were higher than in round two (0.11 [95% CI = −0.03 to 0.25]). These statistical findings suggest a preference for PhD educational preparation as a key attribute in the selection of nursing faculty.

RQ2. Systems of Tenure and Promotion

Structures, like tenure, were found to impact the hiring and utilization of nursing faculty possessing terminal practice-based degrees. Specifically, tenure was reported by the participants to be a significant barrier for DNP-prepared faculty, especially at universities. Evidence was offered which established that, at some universities, these structures even explicitly prohibit faculty possessing these degrees from achieving tenure. However, other institutions were not as decisive because a master's degree was a common minimum educational requirement for tenure at Canadian undergraduate nursing programs. Colleges, commonly partnered with a university, were described as being hospitable to DNP-prepared faculty because they do not have the same regulatory academic structures and/or bounds of a university. Despite this context, a key finding of this study was a desire by the participants for evolution in these systems to be inclusive of alternative forms of scholarship.

RQ3. Potential Roles

The perception that DNP-prepared faculty could serve in a teaching track role emerged throughout the study and achieved consensus in round three. This perception was supported through comments by participants about their previous experiences with DNP-prepared faculty or the belief that DNPs are prepared to translate knowledge into practice, which benefits patient care and nursing students. Further, it was suggested that: "[H]aving a balance of faculty prepared with both significant research and clinical practice is needed in nursing programs in order to best support student learning. Nursing is a practice discipline so having faculty with strong practice foundation is essential."

Concerns for the integration of DNP-prepared faculty was also identified. Specifically, fear was expressed for the erosion of the role of a PhD-prepared educator, which could have a detrimental impact on the nursing profession. This was identified as the substitution of DNP-prepared faculty for PhDs and the concomitant dilution of research capability amongst nursing faculty.

A consequence of the perceived lack of research ability amongst DNP graduates was expressed through potential barriers for faculty possessing non-traditional doctoral degrees. As the study progressed, the participants' attitude of whether they would recommend faculty to pursue a DNP degree shifted significantly. Initially, only 26.7% of participants advised that they would recommend the DNP to faculty

seeking to advance their education. In round two, the participants support for the degree shifted significantly to 62.5% but was accompanied by a caveat. A need was expressed to make faculty aware of the limitations for an academic career associated with the degree. The limitations identified by the respondents centered on an inability to achieve tenure at certain types of institutions and the impact this choice could have on a "full academic career."

Conclusions

The perceptions of academic administrators were explored with consensus being achieved regarding the following topics. The first topic that developed consensus was the attribute of research ability which was identified as a key consideration in the hiring and utilization of doctorate prepared nursing faculty. This conclusion was drawn from the participants near exclusive preference for PhD-prepared candidates during the forced-choice scenarios. Furthermore, qualitative response explained traditional research ability is an essential attribute to the role of a faculty member, especially in a university setting.

Systems of tenure are a barrier to the integration of DNP-prepared faculty because of the perception that they lack of research capability. Further these systems were designed for PhD prepared faculty and emphasize traditional research and the generation of knowledge. In contrast, the DNP degree is intended to transition knowledge to professional practice, which is a substantial difference and a limiting factor for those possessing practice-based doctoral degrees.

This study revealed a role for DNP-prepared nursing faculty in Canadian undergraduate nursing programs in clinical practice education, which logically emanates from the degrees inception being designed to create nurses that are experts in practice and equipped to translate knowledge into practice. A collaborative relationship between PhD and DNP-prepared nurses was another specific area of consensus amongst the participants as a means to bridge the gap between scientific discovery and its application to practice.

Despite this consensus, there is also a concurrent resistance to the integration of DNP-faculty. This resistance was evidenced by the outright rejection and open hostility of a minority of participants. There was a concern expressed that the degree would lead to negative impacts on the profession, as a result of limited research ability. This finding points to the development of occupational closure in the higher education based on terminal degree. However, there was also a counter balancing opinion that there were potential roles that extended beyond clinical education in a teaching track position. This finding suggests that the potential for DNP-faculty will vary between institutions based on the perception of the degree by academic leaders.

As a result of the emergence of the DNP degree and the finding of this study respecting support for their inclusion in higher education roles, academic administrators will need to understand this emerging degree option to appropriately assess faculty and shape the constitution of faculty.

Limitations

This study attempted to develop consensus through a group of experts utilizing a modified e-Delphi technique which does not equate to generalizable findings. Rather, the primary focus was to explore the perceptions and reasoning by the participants sampled. Acknowledging that hiring decisions are complex, a comprehensive exploration of this process was beyond the scope of this research. Instead this research provided descriptive information regarding the perception of the emergence of the DNP-prepared nursing faculty through the development of consensus amongst participating Canadian academic administrators.

This study experienced specific limitations resulting from its sample (size and profile) and as a result of its design. A further limiting factor of its methodology is the time required to participate which may have contributed to attrition. Further, the use of descriptive statistics did not afford generalizability of the results from this study. Consequently, readers will need to determine the degree of transferability to their own context. The specific limitations of this study are areas that future research is recommended.

Declarations

LIST OF ABBREVIATIONS

CASN = Canadian Association of Schools of Nursing

CNA - Canadian Nurses Association

DNP = Doctor of Nursing Practice

EdD = Doctor of Education

LOA = Level of Agreement

PhD = Doctor of Philosophy

RN = Registered Nurse

Ethics approval and consent to participate:

Ethics approvalwas received from the Bethel University Institutional Review Board on December 18, 2017 —Reference #IRB00008567/Federal Wide Assurance #FWA000018734. Written consent was obtained electronically from the participants.

Consent for publication:

Not applicable.

Availability of data and material:

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests:

The authors declare that they have no competing interests.

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Authors' contributions:

- EA analyzed and interpreted the data regarding perceptions of academic leaders' of the Doctor of Nursing Practice (DNP) Degree as Educational Preparation for Nursing Faculty. EA designed and created the software used in the work.
- PP contributed to the design of the work.
- SB contributed to the design of the work.
- DD contributed to the design of the work.

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Results

Results

Figure 1 demonstrates the demographic information collected during the initial questionnaire[1]. Participants were also initially asked to identify whether they had previous experience with a DNP-prepared nurse. Nearly half of respondents (47%) reported that their institution employs a DNP-prepared nursing faculty member. The majority of participants reported exposure to a DNP-prepared nurses in various roles (60%), with university colleague being the most prevalent. The remaining 13% indicated that they "did not know" if they had worked with a DNP-prepared nurse.

Scenario Forced-Choice

A series of ten forced-choice scenarios were presented to the participants requiring them to rank a preferred candidate between two fictitious faculty profiles. These scenarios were developed to determine the hiring preference of academic administrators based on three criteria established in the literature: (1) terminal degree, (2) clinical expertise, and (3) research capacities. The specific variables (i.e. years of research experience) were chosen to generate qualitative responses. Furthermore, two scenarios were developed to reflect each of the five domains of nursing: (1) clinical care, (2) education, (3) administration, (4) research, and (5) policy [10]. Selections were analyzed using percent agreement and further analyzed for patterns of agreement based on demographic characteristics. The third and final

round explored participants' decision making through qualitative questions. Figure 2 demonstrates the scenario forced-choice scenario data collected through the initial two round questionnaires[2].

Level of Agreement

A series of six level of agreement (LOA) questions required participants to manipulate a graphic to represent their LOA with each question. These were repeated through subsequent rounds until consensus was achieved. Figure 3 demonstrates the LOA question response patterns through all three rounds of the study, unless a consensus was achieved[3].

Ranking

Participants were initially asked to list up to three requirements that they believe are or should be essential for tenure and promotion at their institution. The responses were grouped using thematic analysis to generate a list that was ranked/ordered in round two. Figure 4 demonstrates the list of requirements and the pattern in which they were ranked by the participants[4].

Yes or No Questions

Participants were asked a series of yes or no questions which were repeated through subsequent rounds. Figure 5 demonstrates the response patterns to the Yes or No questions through all three rounds of the study[5]. The format of the final round questionnaire was aligned to the previous, including scoring regarding the of LOA to the questions. However, a final one-page summation of the prior two rounds was provided for review.

Figures

Figure 1.

Demographic Data N = 15					
Province*	Ontario (33.3%)	Alberta (33.3%)	BC (13%)	Maritimes (6%)	Saskatchewan (6%)
**Institution Type ** **	University (67%)	Polytechnic (6%)	College (27%)		
Professional Designation	RN (87%)	Non-RN (13%)			
Highest Level of Nursing Education	Doctorate (34%)	Master's (40%)	Bachelors (13%)	none (13%)	
Highest Level of Education* **	Doctorate (60%) *PhD EdD* (8) (1)	Master's degree (40%)			
Country of Highest Degree	Canada (100%)	Other (0%)			

*   This pattern resembles the national distribution of Canadian undergraduate nursing education programs.

**   This breakdown is also somewhat representative of the population of Canadian undergraduate nursing programs where 54% of institutions are universities, 33% colleges, and 13% polytechnics.

***   The median year respondents reported receiving their highest degree was 2003, with a range of 24 years (1991-2015).
The majority of respondents (10) reported that they received their highest degree after the year 2000, with seven (7) indicating attaining their highest degree between 2000-2010. Five (5) respondents indicated that they had received their highest degree prior to the year 2000.

Figure 1

DNP Modified eDelphi (2019) Demographics Summary: This figure demonstrates demographic data from participants in a 2018 modified eDelphi study.

Scenario	Directions	Round One		Round Two	
		Percentage	n	Percentage	n
	Please rank the following prospective nursing faculty in the order in which you desire them as a faculty member.				
1	An RN possessing a PhD (2005) with 10 years of research experience and 5 years of previous clinical practice experience.	73.3%	11	62.5%	5
	An RN possessing a DNP (2005) with 5 years of research experience and 10 years of recent clinical practice experience.	26.7%	4	37.5%	3
2	An RN possessing a PhD (2015) with 1 year of research experience and 5 years of previous clinical practice experience.	73.3%	11	75%	6
	An RN possessing a DNP (2015) with 1 year of research experience and 5 years of recent clinical practice experience.	26.7%	4	25%	2
	Please rank the following prospective nursing faculty in the order in which you would hire them as a faculty to teach clinical practice education.				
3	An RN possessing a PhD (2005) with 5 years of research experience and 10 years of previous clinical practice experience.	46.7%	7	62.5%	5
	An RN possessing a DNP (2005) with 5 years of research experience and 10 years of recent clinical practice experience.	53.3%	8	37.5%	3

Scenario	Directions	Round One		Round Two	
		Percentage	n	Percentage	n
	Please rank the following prospective nursing faculty in the order in which you desire them as a faculty to teach clinical practice education.				
4	An RN possessing a PhD (2015) with 1 year of research experience and 15 years of previous clinical practice experience.	53.3%	8	62.5%	5
	An RN possessing a DNP (2015) with 1 year of research experience and 15 years of recent clinical practice experience.	46.7%	7	37.5%	3
	Please rank the following prospective nursing faculty in the order in which you desire them as a faculty to perform academic administrative or other leadership roles (i.e. associate dean, academic chair, program head, etc.).				
5	An RN possessing a PhD (2005) with 10 years of research experience and 10 years of previous clinical practice experience.	93.3%	14	87.5%	7
	An RN possessing a DNP (2005) with 10 years of research experience and 10 years of recent clinical practice experience.	6.7%	1	12.5%	1
6	An RN possessing a PhD (2015) with 5 years of research experience and 5 years of previous clinical practice experience.	80%	12	75%	6
	An RN possessing a DNP (2015) with 5 years of research experience and 5 years of recent clinical practice experience.	20%	3	25%	2

Scenario	Directions	Round One		Round Two	
		Percentage	n	Percentage	n
	Please rank the following prospective nursing faculty in the order in which you desire them as a nursing research coordinator.				
7	An RN possessing a PhD (2005) with 10 years of research experience and 5 years of previous clinical practice experience.	93.3%	14	87.5%	7
	An RN possessing a DNP (2010) with 5 years of research experience and 10 years of recent clinical practice experience.	6.7%	1	12.5%	1
8	An RN possessing a PhD (2010) with 5 year of research experience and 10 years of previous clinical practice experience.	53.3%	8	75%	6
	An RN possessing a DNP (2005) with 10 year of research experience and 5 years of recent clinical practice experience.	46.7%	7	25%	2
	Please rank the following prospective nursing faculty in the order in which you desire them as a health policy lecturer.				
9	An RN possessing a PhD (20010) with 10 years of research experience and 10 years of previous clinical practice experience.	73.3%	11	62.5%	5
	An RN possessing a DNP (2010) with 10 years of research experience and 10 years of recent clinical practice experience.	26.7%	4	37.5%	3
10	An RN possessing a PhD (2010) with 5 years of research experience and 5 years of previous clinical practice experience.	60%	9	62.5%	5
	An RN possessing a DNP (2010) with 5 year of research experience and 5 years of recent clinical practice experience.	40%	6	37.5%	3

Figure 2

DNP modified eDelphi (2019) Scenarios 1 to 10 results summary: This figure demonstrates two rounds of hiring scenario responses to a modified eDelphi study (2018).

(Q11) Please rate your knowledge of the educational preparation of DNP graduates.

Round One

Round Two

Round	n	Mean	Median	Mode	Range
1	15	53.6	57	90	99
2	8	45.4	47.5	none	87

(Q12) Please rate your level of agreement with the following statement:
In the United States, the DNP is considered to be one of two terminal degrees in nursing that differs from the PhD in that it is practiced focused, rather than research focused.

Round One

Round Two

Round	n	Mean	Median	Mode	Range
1	15	49.5	50	50	100
2	8	78.5	80	86	48

(Q13) Please rate your level of agreement with the following statement:
DNP prepared faculty will substantially contribute to scholarship within the nursing profession.

Round One

Round Two

Round Three

Round	n	Mean	Median	Mode	Range
1	15	42.6	50	50	87
2	8	44	43	none	72
3	5	43.2	50	50	69

(Q14) Please rate your level of agreement with the following statement:
Collaboration between PhD and DNP prepared nurses will assist in bridging the gap between scientific discovery and its application to nursing practice.

Round One

Round Two

Round	n	Mean	Median	Mode	Range
1	15	74.1	82	85 82	91
2	8	72.3	75.5	50	48

(Q15) Please rate your level of agreement with the following statement:
Evidence from the United States of America suggests that the DNP is one solution to the shortage of doctoral prepared nursing faculty.

Round One

Round Two

Round	n	Mean	Median	Mode	Range
1	15	49.5	50	50	100
2	8	35.9	43.5	50	56

(Q16) Please rate your level of agreement with the following statement:
The requirements for tenure and promotion should be the same for PhD- and DNP- prepared nursing faculty.

Round One

Round Two

Round Three

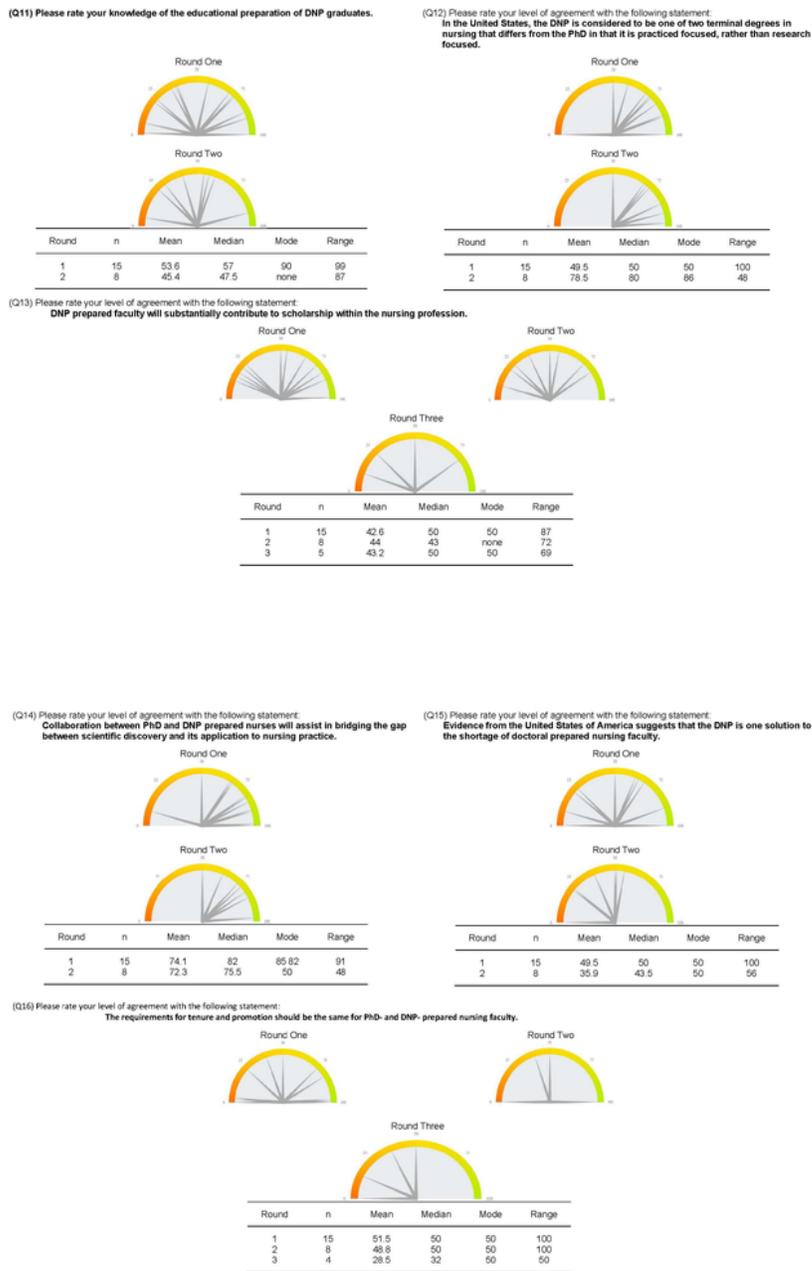| Round	n	Mean	Median	Mode	Range
1	15	51.5	50	50	100
2	8	48.8	50	50	100
3	4	28.5	32	50	50

Figure 3

DNP Modified eDelphi (2019) LOA results summary: This figure demonstrates three rounds of responses to level of agreement data collected through a modified eDelphi study of the DNP degree for nursing faculty (2018).
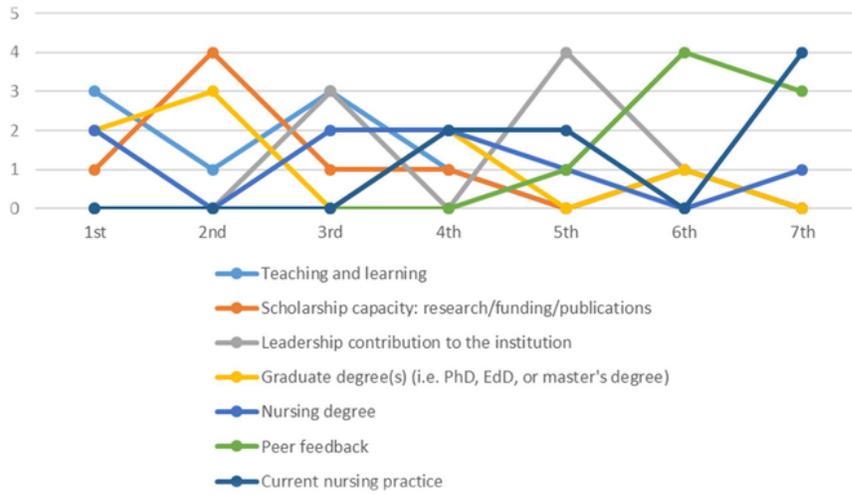
(Q17) Round Two Ranking Summary – Line Graph

Legend:
- Teaching and learning
- Scholarship capacity: research/funding/publications
- Leadership contribution to the institution
- Graduate degree(s) (i.e. PhD, EdD, or master's degree)
- Nursing degree
- Peer feedback
- Current nursing practice

Figure 4

DNP Modified eDelphi (2019) Ranking Activity Results Summary: This figure demonstrates the results of a ranking activity responses to a modified eDelphi study (2018).

(Q18) Round One and Two Summary (Round One n=15, Round Two n=8)

Should clinical practice or service requirements be incorporated into systems of tenure or promotion?

	Round One		Round Two	
Response	Percentage	n	Percentage	n
Yes	66.7%	10	87.5%	7
No	26.7%	4	12.5%	1
No answer	6.7%	1	0%	0

(Q19) Round One Summary (n = 15)

Would a DNP prepared faculty member be eligible for tenure/promotion/merit at your institution?

Response	Percentage	n
Yes	66.7%	10
No	26.7%	4
No answer	6.7%	1

(Q20) Round One and Two Summary (Round One n=15, Round Two n=8)

If you were advising a faculty member seeking to advance their education, would you suggest a DNP degree?

	Round One		Round Two	
Response	Percentage	n	Percentage	n
Yes	26.7%	4	62.5%	5
No	53.3%	8	37.5%	3
No answer	20%	3	0%	0

Figure 5

DNP Modified eDelphi (2019) Yes or No Results Summary: This figure demonstrates two rounds of responses to a series of Yes or No questions from a modified eDelphi study (2018).