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Evidence-Based Practice and U.S. Healthcare Outcomes

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Findings From a National Survey With Nursing Professional Development Practitioners

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Nursing professional development (NPD) practitioners are integral to implementing evidence-based practice (EBP). Research was conducted to describe NPD practitioners' EBP beliefs and competencies, frequency of implementing EBP, and perceptions of organizational culture and readiness for EBP. Relationships among NPD practitioner characteristics and organization outcomes were explored. Findings indicate that NPD practitioners must develop personal competence in EBP, become engaged in shared governance, collaborate with others, and use quality metrics to demonstrate the effectiveness and value of NPD activities.

In 2009, the Institute of Medicine established a goal of having 90% of all clinical decisions based on the latest evidence. Since that time, a plethora of studies have shown that evidence-based practice (EBP) promotes safe, quality patient care (Doran et al., 2014; Melnyk, Fineout-Overholt, Gallagher-Ford, & Kaplan, 2012). Despite this overwhelming evidence, adoption of EBP remains well below the 90% goal (Melnyk et al., 2016; Yoder et al., 2014).

Although the role of nursing leadership is instrumental to implementation of EBP, a 2016 study found that, although chief nurse executives (CNEs) perceive EBP to be important, it is not a high priority, and little funding is allocated for its implementation (Melnyk et al., 2016). Pursuant to this study, a forum with 150 nursing executives was held at the American Organization of Nurse Executives annual conference to discuss proposed solutions. Although the focus of this forum was the role of the CNE in integrating EBP into practice, many of the proposed solutions fell within the realm of nursing professional development (NPD) practitioners. Some recommended that actions suggested by this group included building a critical mass of EBP mentors in healthcare systems and integrating EBP into orientation; continuing education, and daily interprofessional practice activities such as rounds, patient care conferences, councils, and committees. Recognizing the integral role NPD practitioners play in integrating EBP into practice, a second study, closely replicating the CNE study, was initiated through a partnership with the Association for Nursing Professional Development (ANPD), the Center for Transdisciplinary Evidence-Based Practice at The Ohio State University, and Elsevier Clinical Solutions. The aims of the study were to gain an understanding of the current state of NPD practitioners' EBP beliefs and competencies, and their frequency of implementing EBP and perceptions of organizational culture and readiness for EBP. An additional aim was to explore relationships among NPD practitioner characteristics and healthcare organization outcomes such as nursing sensitive quality indicator scores and core measures.

BACKGROUND

Although similar to nurse educators in academia, NPD practitioners work in the clinical setting to educate nurses and other healthcare professionals and personnel. Standards of NPD practice hold NPD practitioners accountable

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for championing scientific inquiry and ensuring that practicing nurses have the competence to implement EBP. Moreover, they are accountable for implementing and sustaining changes that align with EBP, collaborating with interprofessional team members to promote healthcare outcomes through quality initiatives, and leading interprofessional initiatives to enhance quality patient outcomes (Harper & Maloney, 2016). To fulfill these expectations, NPD practitioners must possess competence in implementing and sustaining EBP. In addition, these competencies are needed to facilitate the actions recommended by CNEs.

Little is known about NPD practitioners' competence, beliefs, and implementation of EBP. Milner, Estabrooks, and Humphrey (2005) compared research use between "clinical nurse educators" who fulfilled the role of NPD practitioners, staff nurses, and nurse managers. In a convenience sample of 82 clinical nurse educators from Alberta, Canada, the researchers found that these educators reported higher research use than either staff nurses or managers. Although they used a study tool that had not been validated, the researchers found that NPD practitioners are an "untapped resource" for promoting EBP cultures.

In a later study, Strickland and O'Leary-Kelley (2009) examined 122 clinical nurse educators' (NPD practitioners') perceptions of research use barriers and facilitators. The top barriers identified in this sample were lack of finances, time, and nurses' authority to implement change, whereas NPD practitioners were identified as facilitators because of their ability to use EBP. Although the investigators note the differences in research and EBP, they concluded that NPD practitioners must possess EBP competencies in order to serve as role models, to promote EBP, and to function as change agents within their organizations.

Although clinical educators may purport to use research, a more recent study by Malik, McKenna, and Plummer (2015) of 135 senior nurses, including clinical educators, found continued reliance by participants on personal experience and organizational policies and protocols as formal sources of knowledge versus EBP. Perceived barriers to EBP translation were a lack of knowledge in appraising and using evidence, and lack of support by the organization for its successful implementation.

Although the described studies evaluated research implementation and perception of research utilization barriers and facilitators, research utilization is but one component of EBP (Yoder et al., 2014). EBP encompasses formation of a clinical question, appraising the existing literature, and application and evaluation of findings. Furthermore, EBP incorporates clinician expertise and patient preferences. No studies were found that specifically describe NPD practitioners' beliefs, competencies, implementation, and perceptions of organizational culture and readiness for EBP. As a result, the aims of this study were threefold:

1. Describe NPD practitioners' EBP beliefs, EBP implementation, and perceptions of organizational culture and readiness for EBP.
2. Determine organizational infrastructures for EBP and NPD practitioners' awareness of and engagement in these infrastructures.
3. Characterize the relationships among study variables.

METHODS

Design

This nonexperimental, descriptive, correlational, cross-sectional study was conducted using a Web-based survey. The Ohio State University Institutional Review Board deemed the study exempt.

Procedure

Members of the ANPD were invited by e-mail to participate in an online survey. Two distinct survey rounds were conducted. After a low survey completion rate in the first round, the investigators identified that participants tended to discontinue participation in the survey when organizational outcome metrics were requested. As a result, after receiving institutional review board approval, the investigators added an "I don't know" response option to organization metric queries and reissued the invitation to participate. During each round, reminder e-mails were sent approximately every 10 days.

Sample

A convenience sample of 3,397 ANPD members was invited to participate in this study. Prior to commencement of the survey, ANPD gave members an opportunity to opt out of having their e-mail released to Ohio State University for the purposes of this research. Participants were offered the opportunity to receive one of two $100 gift cards. Gift card recipients were randomly selected after the survey closed.

Measures

EBP beliefs, implementation, and readiness scales

In addition to demographic data, three instruments with good demonstrated validity and reliability were used in this study: the EBP Beliefs (EBPB) Scale, the EBP Implementation (EBPI) Scale, and the Organizational Cultural and Readiness for System-Wide Integration of EBP Scale (OCRSIEP). The EBPB is a 16-item instrument that measures the value placed on EBP and the participant's ability to implement EBP on a 5-point Likert-type scale (Melnyk, Fineout-Overholt, & Mays, 2008). Higher total scores indicate higher beliefs. The 18-item EBPI uses a 5-point Likert-type scale to measure frequency of implementation of specific EBP processes over the past 8 weeks (Melnyk et al., 2008). These processes include actions such as critical appraisal of evidence,

development of a PICO (population, intervention, comparison, outcome) question, and use of evidence to change practice. Higher scores indicate more frequent implementation. The OCRSIEP is a 19-item survey that measures participants' perceptions of their organization's culture and its preparedness for EBP implementation. It uses a 5-point Likert-type scale to measure items such as perceived levels of commitment among staff and resources available for implementation of EBP. All three scales showed construct, content, and face validity. Strong internal consistency, ranging from .88 to .95, has been reported for all three scales (Melnyk, Fineout-Overholt, Giggleman, & Cruz, 2010; Thorsteinsson, 2013; Wallen et al., 2010; Warren, Montgomery, & Friedmann, 2016). For this study, Cronbach's alphas were .89 for EBPB, .96 for EBPI, and .94 for OCRSIEP.

EBP competencies

The EBP Competencies for Practicing Registered Professional Nurses and Advanced Practice Nurses tool was used for self-assessment of EBP competence. This self-assessment survey includes the 24 competencies identified through a Delphi survey with an expert panel and 80 EBP mentors (Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014). Participants rated themselves using a 5-point Likert-type scale where 1 = *not competent*, 2 = *needs improvement*, 3 = *competent*, 4 = *advanced*, and 5 = *outstanding*.

Organizational outcomes and structures

Participants were asked to provide publicly reported organizational outcomes data. In addition, they were asked about organizational structures such as shared governance councils, leadership support, and resources. Finally, participants were asked to identify the priority of EBP at both personal and organizational levels, the primary facilitator of EBP, and the primary barrier to EBP. A total of 46 questions were included in this section of the survey.

Data Analysis

Returned survey data were exported from Qualtrics to a standard statistical package, SAS version 9.3, and analyzed. For each of the four scales, an NPD practitioner's responses were aggregated by adding the item scores. They were also aggregated by averaging the item scores so that aggregates could be interpreted using the underlying Likert scale. For scale aggregates and other survey items that could be considered quantitative variables, means and standard deviations, as well as medians and ranges, were used to describe central tendency and dispersion. For categorical variables, counts and proportions were used to describe the distribution of values. The statistical significance of bivariate relationships was assessed using a p-value ≤ 0.05. For variable pairs that were nominal/ordinal or ordinal/ordinal, relationships were assessed using the Jonckheere–Terpstra test. The Jonckheere–Terpstra test is designed to detect whether the mean scores of the one variable increases or decreases across the levels of the other variable. For variable pairs that were nominal/continuous or ordinal/continuous, relations were assessed using the Kruskal–Wallis test. The Kruskal–Wallis is a nonparametric equivalent of a one-way analysis of variance used for data not meeting the assumption of normality.

RESULTS

Demographics

A total of 253 NPD practitioners from 43 states and the District of Columbia participated in this study. Sixty-five surveys were completed in the first round with 188 surveys in the second round for a 7.4% response rate. Participants were predominately Caucasian (93%) women (95%), with a median age of 54 years and a median of 8 years of experience in NPD. Most respondents worked in acute care hospitals (n = 232/253; 92%), and of those, more than half (58%) worked in community/regional hospitals. Within these organizations, 75% (n = 189/253) of NPD practitioners were prepared at the master of nursing (n = 169; 67%) or doctoral degree (n = 20; 8%) level. Furthermore, on average, 20% of NPD practitioners were certified in NPD and 31% of nurses within the participants' organizations held specialty certification.

EBP Beliefs

As shown in Table 1, the average total score for the EBPB Scale was 64.3 out of 80. The mean average item score of 4.0 indicates high levels of belief. Items with the highest mean scores were "EBP results in best care for patients" (4.7) and "EBP guidelines can improve clinical care" (4.6). Lowest scores were obtained for "I can overcome

TABLE 1 Nursing Professional Development Practitioner Scores on the EBP Scales (Mean ± *SD*)

Scale	Potential Range of Sum of Items	Sum of Items	Mean of Items
EBPB	16–80	64.3 ± 8	4 ± 0.5
EBP Competency Scale	24–120	80.6 ± 17.7	3.4 ± 0.7
EBPI	18–90	40.8 ± 15.9	2.3 ± 0.9
OCRSIEP	25–125	80.4 ± 18.6	3.2 ± 0.7

Note. Two forms of aggregating item scores are presented, summing item responses and averaging item responses. EBPB = Evidence-Based Practice Beliefs Scale; EBPI = Evidence-Based Practice Implementation Scale; OCRSIEP = Organizational Cultural and Readiness for System-Wide Integration of EBP Scale.

barriers for implementing EBP" (3.7) and "I can implement EBP in a time efficient way" (3.6).

EBP Competencies

The average total score on the EBP Competency Scale was 80.6 out of 120, with a mean average item score of 3.4, indicating average levels of competence (see Table 1). No individual item achieved a mean score of 4 or higher. Items with the highest means were Competency 1, "Questions clinical practices for the purpose of improving care" (3.8) and Competency 4, "Searches for external evidence to answer focused clinical questions" (3.9). Lowest scores were obtained for Competency 21, "Participates in the generation of external evidence with other healthcare professionals" (3.0) and Competency 17, "Leads transdisciplinary teams in applying synthesized evidence in decisions and practice" (2.9).

EBP Implementation

As shown in Table 1, the average total score on the EBPI scale was 40.8 out of 90, with a mean average item score of 2.3, indicating average levels of EBP implementation of about one to three times over 8 weeks. The only item that achieved a mean score over 3, indicating the task was completed four to five times over the past 8 weeks, was "Promoted the use of EBP to my colleagues" (3.1). The next highest score (2.9) was for the item "Informally discussed evidence with a colleague." Lowest scoring activities, which occurred less than one to three times in the past 8 weeks, included "Changed practice based on client outcome data" (1.9) and "Generated a PICO question about my practice in my organization" (1.7).

Organizational Readiness for EBP

The average total score on the OCRSIEP was 80.4 out of 125, with a mean average item score of 3.2, indicating that participants perceived their organizations to be somewhat ready for system-wide implementation of EBP (see Table 1). Items with the highest mean scores were "Do staff nurses have access to computers and electronic research databases?" (2.7) and "Do you believe EBP is practiced?" (3.7). Lowest scores were obtained for "Are there advanced practice nurses who are EBP mentors?" (2.6) and "Are there nurse scientists who assist in the generation of evidence?" (2.5). NPD practitioners rated themselves the highest (4.1) among EBP champions followed by advanced nurse practitioners (3.3), administrators (3.0), physicians (2.9), and staff nurses (2.8). Sharing of outcomes as a part of organizational culture was rated 3.7, between somewhat and moderately. When asked about the proportion of decisions generated by various groups, survey respondents assigned on average the largest proportion to upper level administration (57%) and the lowest to direct care providers (40%).

Organizational Outcomes

Publicly reported organizational outcomes provided by participants in the study are shown in Tables 2A and 2B. The percentage of participants who responded that they "did not know" specific organizational outcome measures ranged from 11.9% for catheter-associated urinary tract infections to 18.2% for patient satisfaction with communication about medications.

Organizational Structures

As shown in Table 3, most participants (83%) reported that their organizations have unit-based shared governance councils, whereas fewer reported the presence of EBP (48%) or research councils (61%). NPD representations on councils varied from 53% to 91%, and 43% to 64% have interprofessional representation. Asked whether NPD practitioners collaborate with other interprofessional colleagues on EBP, 30% indicated expert or proficient levels of collaboration, and 7% indicated no collaboration at all. The remainder indicated moderate levels of collaboration.

TABLE 2A Response Distribution for Organizational HCAHPS Outcomes

	Nurse Communication	Cleanliness and Quietness	Responsiveness	Pain Management	Communication about Medications	Discharge Information	Overall
Above 90th percentile	12.3%	11.9%	9.5%	10.3%	12.3%	12.6%	13.8%
50th–90th percentile	52.2%	52.6%	58.1%	54.2%	47.4%	51.4%	51.8%
Below 50th percentile	12.3%	10.7%	9.9%	10.3%	13.8%	10.7%	8.7%
I don't know	15.4%	16.6%	15.0%	17.4%	18.2%	17.4%	17.8%
N/A	7.9%	8.3%	7.5%	7.9%	8.3%	7.9%	7.9%

Note. HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems.

TABLE 2B Response Distribution for Hospital-Acquired Conditions

	Catheter-Associated Urinary Tract Infections	Pressure Ulcer Stage III and IV	Vascular Catheter-Associated Infections	Falls and Trauma
Below national rate	41.5%	39.9%	37.5%	25.3%
Same as national rate	20.6%	23.7%	22.9%	32.8%
Above national rate	22.9%	21.3%	22.5%	24.5%
I don't know	11.9%	12.3%	13.0%	14.2%
N/A	3.2%	2.8%	4.0%	3.2%

Table 4 delineates perceptions of nurse manager support of staff nurses' implementation of EBP and nurse managers' and leaders' implementation of EBP in their personal practices. All were rated in the low to moderate range with mean scores of 2.2–2.5.

Priorities

As shown in Table 5, 17% of participants indicated that EBP is not a priority at this time, whereas 13% listed EBP in the top 5% of priorities. Primary priorities listed by NPD practitioners, shown in Figure 1, included training, continuing education, and competency management. EBP was rated fourth with approximately 8% of respondents listing EBP as one of their top priorities.

Correlations Among Variables

Magnet designation

Magnet hospitals had statistically significant ($p < .0001$) higher levels of baccalaureate (BSN)-prepared RNs, certified NPDs, and nurses certified in a specialty. In addition, Magnet facilities showed significantly higher ($p < .0001$) organizational readiness for EBP as indicated by scores on the OCRSIEP scale. No significant differences were found between Magnet and non-Magnet hospitals in EBP beliefs, competencies, implementation, or organizational outcomes. Table 6 provides effect sizes for statistically significant results.

Shared governance councils

Organizations with EBP councils had statistically significant higher levels of EBP beliefs ($p = .03$), EBP competence ($p = .03$), EBP implementation ($p = .02$), and organizational readiness for EBP ($p < .0001$). In addition, organizations with research or unit-based councils also showed significantly higher levels of organizational readiness for EBP ($p < .001$). No significant difference in participation on unit-based councils was found between centralized and unit-based NPD practitioners.

Outcomes

No trends were found among organizational outcomes and the percentage of BSNs, specialty-certified nurses, and certified NPD practitioners. In addition, no relationships were found among outcomes and EBP beliefs, EBP implementation, organizational readiness for EBP, or the presence of shared governance councils.

DISCUSSION

EBP Beliefs, Competencies, and Implementation

Results of this study indicate that NPD practitioners have strong beliefs about the value of EBP and are confident in their ability to implement EBP. However, the confidence of NPD practitioners in their ability to implement EBP is discordant with the self-assessed lack of personal competence. Participants in this study reported not being competent in several basic steps of the EBP process, including formulating a PICOT (population, intervention, comparison, outcome, time) question related to practice. In fact, no participants reported being highly competent in any aspects of the EBP process, and they reported being the least competent in leading interprofessional EBP teams. The EBP competence deficit may be reflective of the average age of 53 for participants, as these individuals may not

TABLE 3 Shared Governance Councils

	Council Present	Nursing Professional Development Representation	Interprofessional Representation
Unit-based council	83%	53%	43%
EBP council	48%	91%	56%
Research council	61%	82%	64%

Note. EBP = evidence-based practice.

TABLE 4 Nursing Professional Development Practitioners' Perceptions of Nursing Leadership (Mean ± SD)

The extent to which…	Mean ± SD
Nurse managers support staff nurses' EBP activities	2.5 ± 1
Nurse managers implement EBP in personal practice	2.2 ± 1
Nurse leadership (director/CNO/VP) implement EBP in personal practice	2.5 ± 1

Note. Measured on 5-point scale where 0 = *not at all* and 4 = *a great deal*. EBP = evidence-based practice.

have received content related to EBP in their academic nursing programs since the educational focus on EBP in nursing curricula only began in the early 2000s (Stevens, 2013).

The self-reported lack of EBP competence may explain the similar low implementation frequency scores. Of note, the findings of this study are very consistent with national and international studies of nurses and healthcare providers, where nurses' and other healthcare professionals' EBP beliefs are very positive, yet knowledge, implementation, and competence remain low (Melnyk et al., 2012; Thorsteinsson, 2013; Ubbink, Guyatt, & Vermeulen, 2013). An international systematic review by Ubbink et al. (2013) found that 64% (median) of physicians and nurses surveyed viewed their knowledge of EBP as insufficient.

Organizational Structures

The participants in this study perceived nurse manager's implementation of EBP and support of staff implementation of EBP to be low to moderate. Similarly, NPD respondents had rated themselves in the low to moderate range in implementing EBP. In a study by Warren et al. (2016), little change in EBP implementation behaviors were reported by nursing leaders (nurse administrators including nurse managers, NPD practitioners, and other nonclinical support nurses) when measured over two points in time. Results

TABLE 5 EBP Ranking as a Priority

Where Does EBP Fall on Your List of Priorities for Your Organization?	Number of Respondents (%)
Top 5%	33 (13%)
Top 20%	78 (31%)
Top 50%	98 (39%)
Not a major priority at this time	44 (17%)

Note. EBP = evidence-based practice.

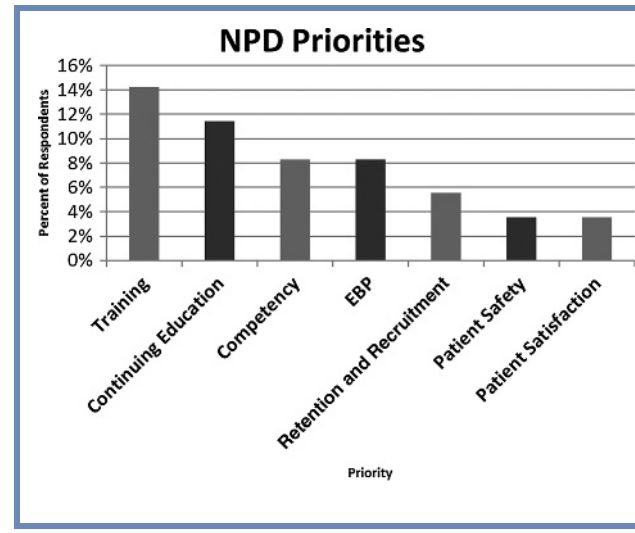

FIGURE 1 Nursing professional development priorities.

such as these are concerning. NPD practitioners in collaboration with nurse managers must move beyond that of facilitators to active participants who role model EBP behaviors on nursing units (Warren et al., 2016).

In addition to perceived lack of nurse manager commitment to EBP, participants reported an overall lack of organizational readiness for system-wide implementation of EBP. A lack of knowledge about EBP and the availability of EBP mentors and champions were key areas identified as needing improvement.

Less than half of the participants reported that their organizations have EBP councils. However, of those organizations that have EBP councils, NPD practitioners have representation on 91%. The positive correlations among the presence of EBP councils and higher organizational readiness, EBP beliefs, competencies, and implementation may indicate that these councils are integral to the enculturation of EBP. Many studies have shown that EBP and research integration can be supported through strong leadership and infrastructures such as councils (Kelly, Turner, Gabel Speroni, McLaughlin, & Guzzetta, 2013; Sandström, Borglin, Nilsson, & Willman, 2011; Ubbink et al., 2013; Wilson, Kelly, Reifsnider, Pipe, & Brumfield, 2016).

Although NPD practitioners reported high levels of participation on EBP councils, participation on unit-based councils was only 53% among this sample. This finding suggests that NPD practitioners may be missing opportunities to interact with staff at the point of care to identify professional practice gaps and areas where EBP projects and educational interventions are needed.

Outcomes

Another concern is the number of NPD practitioners (11%–18% of participants) self-reporting that they did not know specific quality metrics such as hospital-acquired

TABLE 6 Statistically Significant Relationship Among Variables

		Mean (*SD*) When Status Is Yes	Mean (*SD*) When Status Is No	Difference Between Means (95% CI)	Cohen's *d*
Results for Magnet status	% of BSN-prepared RNs	66.7 (17.2)	46.9 (21.5)	19.8 (13.6, 25.9)	1
	% of NPD practitioners certified in NPD	33.6 (33)	13.9 (23.2)	19.6 (11.9, 27.4)	0.7
	% of nurses certified in a specialty	41.6 (19.7)	25.6 (20.7)	15.9 (9.3, 22.5)	0.8
	OCRSIEP (sum of items)	93.4 (15.7)	74.5 (16.7)	18.9 (14.5, 23.3)	1.2
Results for EBP council status	EBPB (sum of items)	65.4 (8)	63.3 (7.9)	2.1 (0.2, 4.1)	0.3
	EBP Competency Scale (sum of items)	83.4 (18.3)	78.1 (16.7)	5.4 (1, 9.7)	0.3
	EBPI (sum of items)	43.2 (16.8)	38.5 (14.6)	4.7 (0.8, 8.6)	0.3
	OCRSIEP (sum of items)	87.2 (17.4)	74 (17.5)	13.1 (8.8, 17.4)	0.8
Results for unit-based council status	OCRSIEP (sum of items)	82.4 (18.1)	70.8 (18.2)	11.6 (5.6, 17.5)	0.6
Results for research council status	OCRSIEP (sum of items)	86.2 (17.2)	71.3 (17)	14.9 (10.6, 19.3)	0.9

Note. Effect sizes of statistically significant bivariate relationships. Effect sizes include the difference between the means of the variables and Cohen's *d*, a standardized difference between the means. NPD = nursing professional development; OCRSIEP = Organizational Cultural and Readiness for System-Wide Integration of EBP Scale; EBPB = Evidence-Based Practice Beliefs Scale; EBP = evidence-based practice; EBPI = Evidence-Based Practice Implementation Scale.

condition rates and patient satisfaction scores. Although survey fatigue may have contributed to these findings, NPD practitioners who lack knowledge of quality metrics are unable to demonstrate and evaluate their contributions to critical patient and organizational outcomes.

Contrary to the findings of Harper, Aucoin, and Warren (2016), no statistically significant relationships were found between numbers of NPD practitioners and organizational outcomes. Harper et al. found that organizations with higher numbers of NPD full-time equivalents per bed showed higher patient satisfaction with discharge instructions and communication. The paucity of research into the correlations among NPD practitioner numbers and activities with patient outcomes prevents forming conclusions.

As may be expected, numbers of certified nurses and nurses with BSNs were significantly higher in Magnet-designated hospitals due to Magnet criteria that promote education and certification (American Nurses Credentialing Center, n.d.). In addition, Magnet facilities had significantly higher numbers of NPD practitioners. Interestingly, no differences in organization outcomes were found between Magnet and non-Magnet hospitals. According to the Institute of Medicine (2015), these findings are among the few that have not shown significantly positive relationships between Magnet status and patient outcomes.

Priority of EBP

Less than 50% of NPD participants in this study identified EBP in the top 50% of their priorities. Although not in the top 50%, EBP rated fourth among identified priorities after training, continuing education, and competency assessment. In their study of chief nursing officers (CNOs) Melnyk et al. (2016) found EBP to be ninth among identified priorities with the top priorities of CNOs including quality, patient safety, and benchmarks. Although neither CNOs nor NPD practitioners rated EBP as a high priority, their top priorities clearly depend on EBP for success. For example, EBP contributes to quality care and patient safety (Gallagher-Ford, Buck, & Melnyk, 2015; Lunenburg, 2011; Melnyk, Gallagher-Ford, & Fineout-Overholt, 2017), the CNO's highest priorities. Clearly, EBP is the foundation for the identified priorities of both CNOs and NPD practitioners.

Limitations

The initial response to the survey was low, and of those participants who responded, an unexpectedly large number did not complete the survey. This missing data issue was addressed by conducting a second round of the survey. In spite of these efforts, the overall response rate remained low, a possible indication of survey fatigue. As a result, nonresponse bias may have occurred.

A convenience sample of members of ANPD was used for this study. NPD practitioners who belong to this professional organization and volunteered to participate in this study may be more involved and not representative of the entire population of NPD practitioners.

IMPLICATIONS FOR NPD PRACTICE

NPD Practitioner Role in EBP

In an NPD role delineation study, Warren and Harper (2016) identified seven roles for NPD practitioners, including learning facilitator and champion of scientific inquiry. These seven roles were subsequently incorporated into the *Nursing Professional Development: Scope and Standards of Practice* (Harper & Maloney, 2016). Within the scope and standards, champion for scientific inquiry is described as a role in which "The NPD practitioner promotes the generation and dissemination of new knowledge and the use of evidence to advance NPD practice, guide clinical practice, and improve patient care" (p. 17). Furthermore, Standard 9, EBP and Research, tasks NPD practitioners with creating "a supportive environment for nursing research, scientific inquiry, quality improvement and evidence-based practice" (p. 45). NPD practitioners have a crucial function in promoting organizational readiness for EBP through providing educational activities and using evidence to guide clinical practice.

NPD practitioners must acquire EBP competencies through ongoing personal professional development in formulating clinical questions and searching for evidence and in leading interprofessional teams to ensure that patients receive care based on the latest and best evidence. In addition to learning facilitators and champions for scientific inquiry, NPD practitioners must function as change agents, leaders, and mentors to promote organizational readiness for implementation of EBP (Harper & Maloney, 2016; Melnyk et al., 2012; Warren & Harper, 2016).

In order to fulfill their crucial role of integrating EBP into daily nursing practice, NPD practitioners must demonstrate competence in their specialty. Competence in a specialty may be validated through certification. Results from this study indicated that only 20% of NPD practitioners are certified in NPD as compared to 31% of other nurses in their organizations. These findings are consistent with those of an NPD organizational value study that showed only 16% of NPD practitioners were certified in NPD whereas 50% of them were certified in a "clinical" specialty such as emergency or oncology nursing (Harper et al., 2016). This low rate of certification among NPD practitioners suggests that NPD is not well recognized as a bona fide specialty and that NPD practitioners may value certification in their clinical specialty more highly.

NPD Practitioners' Role as Leaders

According to the *Nursing Professional Development: Scope and Standards of Practice* (Harper & Maloney, 2016), NPD practitioners are accountable for basing the content of educational activities on current evidence. In this era of pay for performance, NPD practitioners' priority focus should be identifying nursing practice gaps and teaching and applying EBP to improve patient outcomes. However, Harper et al. (2016) found that most of the NPD department workload is directed toward managing routine activities such as orientation, regulatory and accrediting body mandatory education requirements, and basic/advanced cardiac life support programs.

NPD practitioners must realign their workload with their organization's mission/vision and goals. Moreover, they must be knowledgeable of organizational metrics to assess achievement of these goals. Using this knowledge, they can identify professional practice gaps and develop interventions to address these gaps—ultimately to influence positive patient outcomes. These interventions must be based on current evidence to be effective. Every department in a healthcare organization must demonstrate its contributions to positive patient outcomes. This imperative is particularly important for NPD departments that typically do not generate revenue. In order to be deemed essential to the organization, NPD practitioners must demonstrate how they influence organizational outcomes.

NPD practitioners can garner support with quality improvement departments to facilitate identification of opportunities for improvement—one type of professional practice gap—and ensure alignment of activities. In addition, collaboration with nurse administrators such as managers, directors, and the CNO may be another mechanism for gaining knowledge about specific quality metrics. Through collaboration, NPD practitioners and nurse administrators may work together to identify professional practice gaps and opportunities for improvement that are ripe for implementation of EBP.

NPD Practitioners' Role in Shared Governance and on Interprofessional Teams

Increased engagement in unit shared governance councils is another method NPD practitioners can use to promulgate integration of EBP into daily nursing practice. NPD departments should have representation on every unit-based council. In addition, this study indicates that an opportunity exists for development of EBP councils to promote an EBP culture and organizational readiness for implementation of EBP. Moreover, NPD practitioners, in their role as a leader, can be instrumental in forming and leading these interprofessional EBP councils (Harper & Maloney, 2016).

Increased engagement in shared governance should be coupled with collaboration with nurse managers and other nurse leaders to facilitate implementation of EBP. NPD practitioners in this study perceived that nurse managers have the opportunity to enhance the promotion of EBP

among staff and implementing EBP. As learning facilitators and mentors, NPD practitioners can facilitate the professional development of nurse managers while promoting a culture of EBP (Harper & Maloney, 2016; Warren & Harper, 2016).

Finally, EBP must become a priority for NPD practitioners. EBP is inherent in identification of professional practice gaps and must be the basis of all educational content. EBP is the key to aligning departmental activities with organizational metrics and demonstrating NPD's role in positively influencing patient outcomes. The findings from this research are a call to action for NPD practitioners to demonstrate their value through promotion of EBP.

CONCLUSION

NPD practitioners, in their roles as champions for scientific inquiry, learning facilitators, change agents, mentors, and leaders have the opportunity to play an integral role in the development of EBP cultures and to prepare their organizations for implementation of system-wide EBP. In order to capitalize on this opportunity, NPD practitioners must ensure personal competence in EBP; become engaged in unit-based shared governance; collaborate with nurse administrators, quality improvement professionals, and the interprofessional team; and use quality metrics as indicators of professional practice gaps and measures of the effectiveness and value of NPD activities. Further research is needed to identify the measurable contributions of NPD practitioners to healthcare organizations, particularly as related to facilitation of EBP, patient outcomes, and achievement of organizational goals.

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