



Impact of Professional Nursing Practices on Patient/Nurse Outcomes

Testing the Essential Professional Nursing Practices Instrument

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Increasing patient and healthcare system complexity and the need to accurately measure the engagement of clinical nurses (CNs) in holistic, professional nursing practice indicates that an update to the Essentials of Magnetism instrument is needed. The purposes of this research were to critique and weight items, assess the value and psychometric properties of the newly constructed Essential Professional Nursing Practices (EPNP) instrument, and establish relationships between EPNPs and CN job, practice, and nurse-assessed patient satisfaction.

The Essentials of Magnetism (EOM) instrument, developed from the Nursing Work Index that was designed to measure the original Magnet® hospital structures,^{1,2} has been updated several times.³⁻⁷

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Increasing patient and healthcare system complexity and the need to accurately measure clinical nurse (CN) engagement in professional nursing practice indicates the need for a new instrument that more accurately measures holistic nursing practices. The EOM instrument measures both processes and structures in the environment that assist/promote professional practice rather than the frequency that RNs engage in nursing processes/practices.⁸ The new instrument, Essential Professional Nursing Practices (EPNP) whose development is reported here, measures practices only. To develop the EPNP, experienced CNs were asked to identify the relative importance of 51 components of nursing practice and then to identify the 10 most important practices.⁹ Factor analysis yielded 8 EPNPs/factors: (1) collaborating with RN/MD/other disciplines, (2) making autonomous decisions, (3) controlling nursing practice, (4) engaging in practice that reflects positive cultural values, (5) practicing with competent RNs, (6) advocating for the patient, (7) engaging in practice based on evidence (EBP), and (8) incorporating multiple systems in planning/providing care to multiple, complex patients in a simultaneous assignment.⁹

Comparison of EPNP Instrument With the EOM II

Four of the EPNPs are similar to the EOM II healthy work environment subscales.⁶ Practicing with a sufficient number of competent RNs is a clarification of one of the EOM factors—perception of adequate

staffing. Although RN-patient (Pt) ratio is important, competence of CN colleagues is the dimension that most impacts quality of nursing practice. Evidence-based practice is included in some EOM subscale items but not as a separate subscale. For example, the EOM nurse manager (NM) support scale contains the item, “Our manager fosters sound decision-making by asking for ‘best practice’ evidence for the decisions we are making.”⁶ Other changes that were made to the new EPNP scale such as patient advocacy have not previously been identified as an important environmental structure or professional nursing practice.³⁻⁷ Managing the multiple patient/simultaneity complexity (MP/SC) has been identified⁹⁻¹³ but not included in previous measurement instruments. Positive cultural values, measured as a separate EOM II subscale, loaded on several EPNP subscales and were therefore eliminated as a separate subscale.⁹ Behaviors reflecting enactment of cultural values are included on the other EPNP subscales.

Categorizing Nursing Practice

Although recognized by other professionals and the public as the most honest, respected, and ethical profession,^{14,15} nursing practice continues to be described/evaluated primarily from a Newtonian, task-oriented, industrial perspective.¹⁶⁻²⁰ Newtonian science uses reductionism to build mathematical models of reality—a single correct answer in every situation and assumption that all issues can be distilled to a unidimensional solution.¹¹

From the Newtonian perspective, tasks are grouped into categories; the larger the number of categories, the greater the risk of losing a sense of the whole while focusing on the parts.¹⁶⁻²⁰ In “RN stacking,”^{20,21} as an example, nursing tasks are grouped into 7 categories. The top category is represented by tasks such as “putting patient back on ventilator,” whereas the bottom 2 levels are exemplified by tasks such as “ordering depleted supplies and personal breaks.” Although linear thinking will continue and is appropriate in some situations, in “person-focused” multisystem, complex processes such as professional nursing practice, the inclusion of relational, holistic complex adaptive system (CAS) thinking and consideration of multiple potential choices are essential.^{11,22} Dooley et al¹¹ demonstrate how nursing/healthcare executives can use both Newtonian and CAS science in total quality management.

Complex Adaptive Systems

Complex adaptive system theory/science is a macro-cognitive²² examination of multiple, interrelated, adap-

tive, interactive systems.²³ Disturbances in the equilibrium of complex systems such as the human body are controlled via negative feedback (rapid pulse rate, shortness of breath) leading to the search for patterns within the complexity—patterns that describe interactions/interrelationships of various systems. Such patterns are practitioner/observer dependent and different for patients, even those patients with the same diagnosis. Nursing practice has been recognized as a CAS because of the dynamic network of interactions needed to execute complex plans of care both for individuals and for a group of assigned patients.^{10,24,25}

Accurate Measurement of EPNP

To accurately assess and make strategic improvements, nursing practices must be examined in relation to structures that promote positive practices and processes and the impact that these have on patient, nurse, and organizational outcomes.⁸ Structures such as compensation guidelines, supply and patient care delivery systems, and RN-Pt ratios are measured by degree of importance/presence. Outcomes are measured similarly, as well as by quantitative indicators such as patient falls, mortality, and job satisfaction. Processes are measured by frequency of reported/observed engagement in components and activities^{26,27} constituting the practices and processes.

Importance and need for attention to the process dimension were demonstrated in a study of the impact of intensive care unit (ICU) structures on outcomes. It was determined that it was processes such as RN-MD collaboration and autonomous decision making that most significantly impact patient outcomes, not ICU structures.²⁸ Increasingly, organizations are recognizing the need to consider the structure-process-outcome paradigm⁸ in assessing and planning strategic improvements in the practice environment. Unfortunately, processes are often combined with and measured as the presence of structures or outcomes. For example, in the Magnet model, exemplary professional practice is verified by the presence of a professional model, policies/procedures, and adequate skill mix.^{14,29,30} As an example, the use of the Practice Environment Scale-Nursing Work Index to assess the degree to which desirable structures/characteristics are present in the work environment³¹ does not measure “frequency of engagement” in holistic nursing practices. Although described as a process measurement tool, not all EOM II items measure processes. For example, assessing “strength of agreement” with the item “nurse’s clinical competence is recognized and rewarded” is measurement of a structure, not a process. Although the RN-MD

collaboration scale measures extent to which the respondent agrees that the described practice exists, it does not measure frequency of respondents' engagement in the practice. Many studies that claim to measure practices actually measure structures that promote professional practice but not the practice itself.^{14,26-29}

Methods

Qualitative and quantitative methods were used in this final stage in the development and testing of the 51-item EPNP instrument. Before the EPNP instrument could be tested, it needed refinement. To complete this phase, RN executives and educators in 15 Magnet hospitals were requested to set up informal group discussions to critique wording and relative importance of each proposed item to CN practice and suggestions for alterations or deletions. Summaries of discussion sessions with more than 200 CN participants were sent to the primary investigator. On the basis of these data, the EPNP instrument was revised to 43 items. Items were weighted in accordance with the relative importance recommended by 60% or more of the participants.

Outcome measurement instruments were developed from descriptions of data reported in the literature^{14,29,30} and from items identified by CNs in previous studies conducted by the authors.^{3,4,6} To measure job and practice outcomes, respondents were asked to indicate level of satisfaction (very satisfied to very dissatisfied) with 6 job satisfiers (salary, parking/food, unit management, physical plant, equipment/supplies, and assistive personnel) and 5 practice satisfiers (overall quality of patient care, RN-Pt ratio, electronic equipment/record, assistive personnel, and collaboration/teamwork with other RNs). To assess patient satisfaction, the respondents were asked to indicate frequency (always, seldom) that patients expressed satisfaction with 5 satisfiers: nursing care received, MD/APN care, care from assistants, attention/response to call lights, and being kept informed/patient teaching.

Because geographic representation was desired, hospitals invited to participate were selected to represent all US census tract regions and all Canadian provinces. The final sample consisted of 7 hospitals from the northeast region and 7 from the north central region, 8 from the western region including Alaska and Hawaii, and 9 from the southeast and south central regions. As hospitals in only 2 Canadian provinces participated, their data were combined with US regions.

Both Magnet hospitals and hospitals with a reputation for quality care participated in the study. Highly recommended non-Magnet hospitals were solicited

from national nursing organization leaders, Boards of Directors, and on-site investigators from previous research studies. Registered nurses invited to participate were experienced CNs responsible for a multiple-patient assignment (≥ 2 patients) on inpatient hospital units.¹⁰ After institutional review board approval, EPNP online survey was completed by 4923 CNs practicing in 22 Magnet and 9 highly recommended hospitals. Academy of Medical-Surgical Nurses respondent data were added to the appropriate subgroup as indicated by respondent on the survey. Completed EPNP survey data were directly downloaded and available only to primary investigators.

Results

Description of the Sample

Almost 80% of the sample ($n = 3884$) reported their highest level of nursing education as a BSN or higher degree, and 14% reported MSN. Five percent were diploma graduates ($n = 266$); 15% ($n = 739$) reported associate degree education. Clinical nurses in the study sample were almost evenly divided with respect to years of RN practice experience; 50.5% ($n = 2473$) had between 1 and 10 years of experience, and the remainder had more than 10 years of experience. The single largest group ($n = 1093$, 22%) had between 10 and 20 years of experience. Clinical nurses represented 13 different inpatient clinical units, with the largest number of nurses practicing on critical care ($n = 687$, 14%), medical ($n = 681$, 14%), medical/surgical ($n = 672$, 13.9%), and surgical ($n = 559$, 11.5%) units.

Psychometric Properties of EPNP and Outcome Satisfiers

Factor Analysis

A factor analysis of the 43 EPNP items was performed using principal component analysis with varimax rotation. Bartlett test of sphericity ($\chi^2 = 101986.139$) was significant at the $P < .0001$ level indicating that a factor analysis was appropriate for these data. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.965 indicating that the strength of relationships among the variables was high and the analysis could proceed. The factor analysis yielded 8 factors with eigenvalues greater than 1.0 and accounting for 60.84% of the variance in the data. Essential Professional Nursing Practices items and factor loadings are presented in Table 1.

The EPNP factor analysis indicated that the factor originally identified as "practicing with a sufficient number of competent RNs" was not 1 but 2 factors. One factor dealt with sufficient numbers, whereas the other factor was concerned with working with

Table 1. Significance of Differences Among Clinical Services on Essential Professional Nursing Practices

Clinical Service (No. Respondents)	Essential Professional Nursing Practice Scores									
	RN/MD/ID Collaboration	Autonomous Decisions	Patient Advocacy	Evidence- Based Practice	Multiple Patients	Sufficient Competent RNs	Cohesive Team	Control Over Practice	Essential Professional Practices	
Pediatrics (106)	53.95 ^a	48.24	70.37	32.01	53.59	25.45 ^a	24.93	18.43	326.91	
NICU/PICU (421)	53.27 ^a	48.08	70.18 ^a	32.02	53.80	26.86 ^a	25.12 ^a	17.91	327.23 ^a	
Oncology (266)	52.70 ^a	48.08	70.25	31.98	52.89	24.29	24.67	17.64	322.31	
Psychiatric (226)	52.16	46.51	68.74	31.76	52.32	23.83	24.23	17.43	316.83	
Medical (688)	52.10	47.62	68.92	31.57	51.59	23.99	24.15	17.78	317.68 ⁺	
Neurosciences (121)	52.51	48.35	69.73	32.21	52.81	24.24	24.79	18.52 ^a	323.45	
Critical care (689)	51.85	47.13	68.93	31.92	52.43	24.32 ^a	24.12 ⁺	17.13 ⁺	317.52 ⁺	
Step-down (175)	51.79	47.90	69.78	31.60	52.75	23.77	24.41	17.84	319.88	
Maternal/child (297)	51.67	48.28	70.35 ^a	32.67	52.73	24.63 ^a	24.54	17.55	322.29	
Orthopedics (167)	51.60	47.10	69.43	31.59	52.37	24.58	24.54	17.56	318.74	
Medical/surgical (681)	51.12 ⁺	47.43	69.46	31.52	52.03	23.12 ⁺	24.04 ⁺	17.31	316.04 ⁺	
Surgical (564)	50.53 ⁺	46.83	68.58 ⁺	31.83	51.50	23.77	24.12 ⁺	17.47	314.53 ⁺	
Telemetry (334)	50.40 ⁺	46.89	68.62	31.58	52.49	23.57	24.34	17.64	315.37 ⁺	

Abbreviation: NICU/PICU, neonatal/pediatric intensive care unit.
^aSignificantly higher ($P \leq .05$) than those with a plus (+) sign.

competent RNs/cohesive team. Despite the need to separate one of the defined EPNP scales, the analysis confirms the structure of the EPNP tool. Factor loadings range from 0.455 to 0.947. Only 3 items had a factor loading of less than 0.678, with those of the other 40 items greater than that loading.

Nurse and Patient Outcome Satisfiers

Factor analysis of the outcome satisfiers was performed using principal component analysis with varimax rotation. Bartlett test of sphericity ($\chi^2 = 31179.12$) was significant at the $P < .0001$ level indicating that a factor analysis was appropriate for these data. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.923 indicating that the strength of relationships among the variables was high and the analysis could proceed. The factor analysis yielded 3 factors with eigenvalues greater than 1.0 and accounting for 59.13% of the variance in the data. Outcome satisfier items and factor loadings are presented in Table 2. Factor loadings ranged from 0.558 to 0.841. The structure for the outcome satisfiers was confirmed.

Internal Consistency

Cronbach's α s were computed for each of the 8 factors and for the total number of items for the EPNP tool. The α s ranged from .741 to .956. Cronbach's α s were computed for each of the 3 factors and for the total number of items on the outcome satisfiers. The α s ranged from .785 to .879.

EPNP Results

Education and Experience of the Sample

Analysis indicated significant differences by education on 2 EPNP scales—using/engaging in EBP ($F = 3.852, P = .004$) and controlling nursing practice ($F = 3.162, P = .013$). Clinical nurses with a BSN degree scored significantly lower than did CNs in all other educational groups on EBP and lower than diploma and MSN-prepared nurses on control over practice. There was a significant difference on the EPNP scale practicing with competent RNs/cohesive team by years of experience. Clinical nurses with 1 to 5 years of experience scored significantly higher than did CNs with 10 to 30 years of experience ($F = 3.693, P = .002$). On 7 of the 8 EPNPs and on the total EPNP, there were no significant differences in Magnet versus highly recommended, non-Magnet hospitals. On the competent cohesive team, CNs in Magnet hospitals scored significantly ($F = 6.780, P = .009$) higher than did CNs working in highly recommended non-Magnet hospitals.

By Clinical Services

Clinical nurses practicing on neonatal/pediatric ICU (NICU/PICU) services scored the highest on 4 EPNP variables and total EPNP (Table 3). Clinical nurses

Table 2. Results of Factor Analysis on the Essentials of Professional Practice Tool

Scale Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
	Collaboration	Autonomous Decision Making	Patient Advocacy	Evidence-Based Practice	Multiple Patients	Competent RNs	Team
Practice with physicians who respect me and ask my opinion about Pt conditions, needs, and treatments	.708						Control Nursing Practice
Am comfortable suggesting to physicians alterations in their plan of care for a Pt	.714						
Can describe decisions made and outcomes achieved from collaborative decision making	.806						
Collaborate with other care professionals and respect each other's body of knowledge	.803						
RNs on our unit help new RNs interact, relate to, and feel a part of the healthcare team	.558						
Am able to resolve conflicts between myself and others	.543						
Participate with representatives from other departments and disciplines in shared decision making	.725						
Coordinate with other disciplines in developing solutions to issues and problems of concern to my Pt	.744						
Make independent decisions in nursing sphere of practice		.724					
Discuss with members of other disciplines before making decisions in areas where nursing overlaps with these disciplines		.713					
Am not afraid to take action when the complexity of the Pt situation requires swift decision making		.698					
Perceive that I have the support of the unit manager/APN for making autonomous clinical decisions		.689					
Guided by urgency of Pt need in decisions in overlap sphere of practice		.697					
Use result of evidence-based practice studies to support the autonomous decisions I make		.708					
Am accountable and others hold me accountable in a positive, constructive way for independent clinical decisions		.743					
Take Pt/family perspective into account when making decisions regarding Pt care			.733				
Use clinical reasoning to determine relative value of different decisions/options			.762				
Promote a caring, compassionate, supportive, and therapeutic environment for each patient			.775				
Advocate on behalf of my Pt to resolve ethical and clinical concerns when the Pt is unable to do so themselves			.797				
Elicit from Pt/family information regarding teaching and other help Pt may need upon discharge			.721				
Engage in both intuitive and analytical thinking to make proper decisions for the Pt at this point in time			.793				
Live our values of being the patient's advocate, ie, I make decisions in the best interest of the Pt			.784				

(continues)

Table 2. Results of Factor Analysis on the Essentials of Professional Practice Tool, Continued

Scale Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
	Collaboration	Autonomous Decision Making	Patient Advocacy	Evidence-Based Practice	Multiple Patients	Competent RNs	Team
Participate in and contribute to evidence-based practice projects				.773			
Improve my practice by using results of evidence-based practice projects				.863			
Keep current with the literature on evidence-based practice in my clinical area of expertise				.849			
Evaluate the validity of evidence suggesting a change in nursing practice				.866			
Use evidence-based practice to make up-to-date, sound clinical decisions				.870			
Help new graduates develop competence in meeting multiple complex needs of the assigned Pt group				.717			
Take into account the many factors and systems that affect my plans of care for my Pt				.768			
Share my clinical thinking/rationale with other RNs and interdisciplinary team members				.764			
Work with other RN team members when 2 or more of my Pts need care at the same time				.716			
Am responsible for responding to urgent needs of other Pts on the unit even if not assigned to me				.678			
Participate in our residency program that improves newly graduated RNs' competence in caring for their group of Pts				.455	.891		
Practice with a sufficient number of RNs to get tasks completed for all Pts					.947		
Have sufficient number of competent nurses so that we can provide holistic professional quality care to all Pts					.909		
Practice with a sufficient number of RNs so that we can provide holistic, professional care to all Pts						.720	
Accept responsibility and accountability for the care to my assigned Pts, including delegated tasks						.822	
Work with other RNs as a cohesive team enabling us to give holistic, professional quality care to all Pts						.802	
Continually strive to improve my competence thru certification, continuing/degree education						.830	
Consult with/validate my plan of care for my Pts with the peers I perceive to be most competent							.892
Provide input into patient care practice policies and procedures							.910
Provide input into personnel policies/procedures (floating, scheduling)							.887
Participate with other disciplines in activities to improve unit/hospital care/practice environment							

Abbreviation: Pt(s), patient(s).

Table 3. Results of Factor Analysis on Outcome Satisfiers

Scale Items	Factor 1	Factor 2	Factor 3
	Job Satisfiers	Practice Satisfiers	Patient Satisfiers
Salary, benefits	.560		
Safe parking, availability of food	.659		
Physical layout and cleanliness of the hospital	.742		
Organization and management of personnel and unit activities	.790		
Availability of equipment and supplies	.782		
Availability of clerical and assistive personnel	.722		
Ease of use of electronic medical record documentation and communication systems		.558	
RN-patient ratio		.783	
Quality of care given to my patients on a regular basis		.841	
Amount of help, teamwork, and collaboration available to me from other RNs on the unit		.797	
Quality of relationships I have with physicians and other healthcare professionals		.703	
Patients/family express gratitude and appreciation for the care I provide			.819
Patients/family speak positively about their physicians and the care they receive from them			.827
Patients/family speak positively about care they receive from assistive personnel			.832
Patients/family comment favorably on staffs' responsiveness to phone calls, lights, etc			.840
Patients nod, are attentive, and express gratitude when I teach them about meds or other health issues			.795

on surgical and medical/surgical services scored in the significantly low subset on 3 of the 8 EPNPs and on total EPNP. Table 4 presents the analysis of variance for the EPNP instrument.

By Individual Hospitals

There were many statistically significant differences between individual hospitals. For the purpose of evaluating the EPNP tool, only the overall mean score, the low mean score, and the high mean score for the 31 hospitals are presented (Table 5). The range of mean scores is within 1 SD of the mean score with the exception of practicing with sufficient number of RNs where the low mean score fell less than 1 SD.

Outcome Satisfiers

By Education and Experience of the Sample

On the 3 outcome satisfiers—job, practice, and patient—there were no significant differences by

education. For years of RN experience, CNs with 1 to 3 years of experience scored significantly higher ($F = 10.18, P = .0001$) than did CNs with more than 3 years and less than 30 years of experience. Clinical nurses with more than 30 years of experience scored significantly higher ($F = 2.79, P = .016$) than did CNs with 3 to 10 years of experience. On 2 of the 3 outcome satisfiers, there were significant differences between Magnet hospital nurses and CNs in the highly recommended non-Magnet hospitals. For job satisfiers ($F = 24.69, P = .0001$) and practice satisfiers ($F = 88.50, P = .0001$), CNs in Magnet hospitals scored significantly higher than CNs in the highly recommended hospitals.

By Clinical Services

There were significant differences on 2 of the 3 outcomes by clinical services. Clinical nurses on NICU/PICU, pediatrics, and oncology reported significantly

Table 4. Significance of Difference in EPNP Scale Scores for Clinical Services: ANOVA

EPNP Scale	Sum of Squares	df	Mean Squares	F	Significance
RN/MD/ID collaboration	2336.829	12	166.916	2.870	.0001
Autonomous decisions	798.578	12	57.041	1.298	.199
Patient advocacy	1570.523	12	112.180	1.946	.018
Evidence-based practice	555.807	12	39.701	1.075	.375
Multiple patients	907.293	12	64.807	1.328	.182
Sufficient competent RNs	1189.809	12	84.986	2.643	.001
Cohesive team	307.360	12	21.954	1.832	.029
Control over practice	569.184	12	40.656	1.784	.035
Essential professional practices	33280.179	12	2377.156	1.744	.041

Abbreviations: ANOVA, analysis of variance; EPNP, Essential Professional Nursing Practices.

Table 5. Range of Hospital Mean Scores and Mean Scores on EPNP: Outcomes

Essential Professional Nursing Practices	Low Mean Score	High Mean Score	Mean (SD) Score
Collaborating with healthcare professionals	49.10	54.30	51.75 (7.94)
Making autonomous clinical decisions	44.13	50.91	47.45 (6.85)
Advocating for the patient	66.31	71.96	69.24 (7.58)
Engaged in/using evidence-based practice	28.65	33.92	31.80 (6.20)
Managing multiple patient responsibilities	50.83	54.83	52.30 (7.16)
Practicing with sufficient number of competent RNs	16.50	28.14	24.20 (6.06)
Functioning cohesive team	22.35	25.41	24.33 (3.56)
Control over nursing practice	15.27	19.35	17.56 (4.90)
Total score for 8 EPNPs	303.86	333.52	318.50 (38.26)
Outcomes			
Job satisfiers	13.29	19.31	16.39 (3.60)
Practice satisfiers	12.21	17.04	15.12 (2.92)
Patient satisfiers	12.79	15.89	14.78 (2.75)

Abbreviation: EPNP, Essential Professional Nursing Practices.

higher practice satisfaction than CNs on step-down, telemetry, and medical/surgical units ($F = 15.17$, $P = .00014$) (Table 6). Clinical nurses practicing on oncology, maternal-child, and orthopedics reported that patients/families expressed significantly greater satisfaction ($F = 7.118$, $P = .0001$) than did CNs practicing on psychiatric, medical-surgical, and critical care services. Clinical nurses practicing on oncology were the only nurses who scored high on all 3 outcome satisfiers.

By Individual Hospitals

There were many statistically significant differences between individual hospitals. For the purpose of evaluating the EPNP tool, only the overall mean score, low mean score, and high mean score for the 31 hospitals are presented (Table 5). The range of mean scores, except practice satisfiers, falls within 1 SD of the overall hospital means.

EPNP: Outcome Correlations

Relationships between EPNPs and the 3 outcomes were assessed by establishing coefficients of correlation.³² All correlations were statistically significant at the 0.01 level. There was a strong correlation between outcomes and 2 EPNP processes—collaborating with other healthcare professionals and making autonomous decisions (Table 7). All other correlations between EPNP processes and outcome satisfiers were low to moderate. The strongest correlations between EPNP scales and the outcome satisfiers were between practice satisfaction, collaborating with other healthcare professionals, sufficient competent RNs, and total EPNP score. Job satisfiers correlated at 0.676 with practice satisfiers. Most highly interrelated EPNPs were patient advocacy, autonomy, MP/SC, and competent RNs.

Table 6. Significance of Differences Among Clinical Services on Outcome Measures

Clinical Service (No. Respondents)	Outcome Measures		
	Job Satisfiers	Practice Satisfiers	Patient Satisfiers
Pediatrics (106)	16.17	15.66 ^a	15.30
NICU/PICU (421)	17.28	16.63 ^a	14.66+
Oncology (266)	16.75	15.50 ^a	15.52 ^a
Psychiatric (226)	16.07	14.84	13.92+
Medical (688)	16.68	15.07	14.90
Neurosciences (121)	16.81	14.93	15.00
Critical care (689)	15.68	15.21	14.57+
Step-down (175)	15.71	14.83+	14.85
Maternal/child (297)	16.64	15.31	15.30 ^a
Orthopedics (167)	16.90	15.08	15.50 ^a
Medical/surgical (681)	16.10	14.38+	14.50+
Surgical (564)	16.52	15.01	15.02
Telemetry (334)	16.49	14.71+	14.85

Abbreviation: NICU/PICU, neonatal/pediatric intensive care unit.

^aSignificantly higher than those with a plus (+) sign.

Table 7. Correlations Between EPNPs and 3 Satisfier Outcomes

EPNP	RN-MD	Autonomy	Patient Advocacy	EBP	MP/SC	Competent RNs	Cohesive Team	CNP	Total EPNP	Job Satisfaction	Practice Satisfaction	Patient Satisfaction
Collaborating with RN/MD/ID	1	0.706	0.517	0.475	0.552	0.429	0.497	0.545	0.803	0.401	0.504	0.399
Autonomous decision making	0.706	1	0.619	0.553	0.578	0.417	0.527	0.499	0.827	0.378	0.446	0.370
Patient advocacy	0.517	0.619	1	0.521	0.651	0.337	0.549	0.338	0.774	0.249	0.317	0.328
Using EBP	0.475	0.553	0.521	1	0.541	0.357	0.454	0.495	0.729	0.228	0.275	0.337
Managing care of multiple patients	0.552	0.578	0.651	0.541	1	0.441	0.588	0.455	0.808	0.287	0.382	0.333
Sufficient number of competent RNs	0.429	0.417	0.337	0.357	0.441	1	0.496	0.485	0.638	0.467	0.594	0.374
Cohesive team	0.497	0.527	0.549	0.454	0.588	0.496	1	0.500	0.727	0.356	0.461	0.374
Control over nursing practice	0.545	0.499	0.338	0.495	0.455	0.485	0.500	1	0.688	0.417	0.454	0.384
Total EPNP score	0.803	0.827	0.774	0.729	0.808	0.638	0.727	0.688	1	0.452	0.559	0.476
Outcomes												
Job satisfaction	0.452	0.378	0.249	0.228	0.287	0.467	0.356	0.417	0.452	1	0.676	0.427
Practice satisfaction	0.559	0.446	0.317	0.275	0.382	0.594	0.461	0.454	0.559	0.676	1	0.442
Nurse-assessed Pt satisfaction	0.476	0.370	0.328	0.337	0.333	0.374	0.374	0.384	0.476	0.427	0.442	1

Abbreviations: CNP, control over nursing practice; EBP, evidence-based practice; EPNP, Essential Professional Nursing Practices; MP/SC, multiple patient/simultaneity complexity; Pt, patient. All coefficients of correlation (*r*) were significant at the .01 level (2-tailed).

Discussion/Suggestions

This evaluation of the newly constructed EPNP instrument confirms its structure and reliability. The EPNP measures the frequency/extent of CN engagement in the activities/components of 8 previously identified EPNPs.⁹ Few differences were identified by educational preparation. The finding that BSN-prepared nurses scored lower than all other practicing nurses on EBP does not fit other reported outcomes.³⁻⁵ On the basis of the curriculum and accreditation standards, it would be expected that BSN-prepared nurses would score higher in this practice. Further research in this area is indicated.

Similarly, the same lack of significance was found between years of RN experience and education. Clinical nurses with less experience or less than 30 years of experience scored higher in EPNPs than did CNs in the other year groupings. This finding is consistent with findings in studies using the EOM.⁴⁻⁷ It was not uncommon for nurses with less experience or less than 30 years of experience to score higher than CNs in the middle range of experience. It is suggested that nurse residency, clinical coaching, and other educational programs may account for the increased EPNP in the 1- to 10-year group.

Differences between clinical services have been a consistent finding in EOM studies.³³ Neonatal ICU/PICU and oncology units have always been high-scoring units on the EPNP. Medical/surgical and psychiatric units tend to be low EOM-scoring units and demonstrated lower EPNP scores. Critical care units scored lower on the EPNP than on the EOM. This may be due to the elevated acuity among ICU patients. Not only does the EPNP differentiate extent of professional practice by clinical unit, combined with the EOM study results, this is further evidence that, if you have quality structures, it is more likely that RNs will report that they engage more frequently in quality nursing practice.

The low range of variability in the hospital means—virtually all scores are within 1 SD of the overall hospital mean—was undoubtedly due to the selection of Magnet and highly recommended hospitals rather than a cross-sample of Magnet and non-Magnet hospitals. In so doing, the sample was biased toward favorable practice environments (structures) and therefore more likely to produce high nursing practice scores and low variability. Additional testing of the EPNP in a wide range of hospitals is needed to determine the full potential of the tool.

The outcome satisfier instrument exhibited the same low variability as the EPNP tool. In addition, the relationship between the EPNP and outcome satisfiers was moderate. It may be that a wider range of outcome satisfiers should be examined.

Individual hospitals have used their EOM results to improve practice environments to encourage CN engagement in professional nursing practice.^{33,34} The EPNP demonstrates this same potential for examination of the extent to which CNs actually engage in EPNPs and the impact that this has on outcome improvement.

In addition to incorporating discussion and appropriateness of CAS theory versus Newtonian thinking in the planning and care of complex patients, attention also needs to be given to professional nurses at all levels in the organization understanding the structure-process-outcome paradigm. For example, nurse executives/directors provide the structures so that NMs can engage in quality managerial/leadership practice resulting in quality outcomes. The outcomes of NM quality practice provide the structures for CNs to engage in professional practice leading to quality patient/nurse/organizational outcomes.^{8,9}

Implications for Practice

Although the measurement of EPNPs was the focus of this research, there are strategies that both practice settings and schools of nursing can implement to assist nurses to engage in professional practices/processes.³⁵⁻⁴⁰ The complexity of CN practice in hospitals is not likely to diminish.^{10,18,35,36,41,42} Every nursing practice may well consist of multiple tasks/activities/interventions. It is particularly imperative that nursing faculty, NMs, and educators understand, teach, and evidence the differences between the Newtonian and CAS perspectives and which science is appropriate to particular clinical/patient situations.

To prepare students/licensed (newly licensed) RNs/CNs for the realities of professional nursing practice, educators need to learn, understand, and teach the

appropriate use of CAS science and theory. Faculty and nurse educators should consider reorganizing the overall structure of nursing curricula accordingly. Currently, the curricula in most schools of nursing are Newtonian-based and organized on a bodily system structure—medical nursing, pediatrics, critical care, and so forth. The latter are not likely to change because hospital units, diagnostic-related groups, and medical practice are organized and based on bodily systems. However, within each of the common nursing courses (medical, critical care, pediatrics, etc), curricula could be reorganized around and focus on professional nursing practices such as patient advocacy, autonomous decision making, MP/SC, macrocognitive thinking, and use and situational appropriateness of CAS and Newtonian science. Nursing must be taught and implemented as a holistic practice that includes efficient and effective tasks and management activities, but it is not solely focused on these tasks.

Conclusions

The EPNP is a psychometrically sound instrument designed to measure the extent to which CNs report engagement in the components of professional nursing practices in highly complex hospital patient care environments. Some of the 8 essential nursing practices are the same as the positive work environment that was the focus of the EOM II,⁵ but all EPNP subscales are designed to measure the extent of involvement in current professional nursing practice. The EOM continues to be an excellent instrument to assess the degree to which CNs perceive that they have the work environment/structures needed to engage in quality nursing practice. The EPNP assesses the extent to which they actually engage in such practice.

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