



Evaluation of Nurse's Touch to Increase Student Success on NCLEX-RN

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Professionalism, Communication, Leadership, Informatics, and Self-Care in Nursing

Professionalism, communication, leadership, use of informatics and technology, and tending to self-care are essential nursing skills. DeLesky in Giddens (2013) defined professionalism as the “assimilation of nursing skills and knowledge integrated with dignity and respect for all human beings, incorporating the assumptions and values of the profession while maintaining accountability and self-awareness”(p. 359). According to Godfrey in University of Kansas Medical Center (2019), professional identity in nursing is defined as a sense of oneself, and in relationship to others, influenced by characteristics, norms, and values of the nursing discipline, resulting in an individual thinking, acting, and feeling like a nurse.

Effective communication in nursing and health care is one of the most important tools nurses have for providing optimal client care and improving teamwork and collaboration. Mastering sound communication skills is essential to nursing practice because poor workplace communication can result in higher turnover rates, increased stress, and lower morale and job satisfaction (Vertino, 2014). Because clear, effective communication is integral to client safety, most, if not all, nursing programs have incorporated communication education and training into their curricula. Nurse-client encounters and interactions with co-workers require exposure to and practice with communication techniques focused on using interpersonal skills and enhancing emotional intelligence to communicate effectively.

Regardless of setting, all nurses are expected to exhibit leadership skills and qualities when delivering client care, collaborating with coworkers, and representing the profession. Leadership is a process whereby a person influences a group of individuals to achieve a common goal (Northouse, 2013). Effective leadership involves influence, setting a compelling vision and course of action, communication, leading change, and sound decision-making.

Nursing informatics “is the specialty that integrates nursing science with multiple information and analytical sciences to identify, define, manage and communicate data, information, knowledge and wisdom in nursing practice” (American Nurses Association, 2015, p. 2). Nurses must be competent in incorporating nursing knowledge, computer skills, information sciences, and complex data systems to support the practice of nursing, and to improve client care outcomes.

According to the American Nurses Association (2015), a healthy nurse actively focuses on creating and maintaining a balance and synergy of physical, intellectual, emotional, social, spiritual, personal, and professional well-being. Healthy nurses thrive across the wellness-illness continuum by modeling healthy behaviors and advocating for health among families, communities, work environments, and clients. Failing to attend to self-care can lead to burnout, a state that can have detrimental consequences including reduced job performance, high turnover rates, medical error, and impaired physical and mental health (National Academy of Medicine, n.d.). Therefore, priority must be given to personal wellness and self-care to effectively manage the physical and emotional stressors of work and home environments.

Study purpose

To determine whether completing at least one of the Nurse's Touch (NT) proctored assessments leads to improved scores on the RN Comprehensive Predictor (CP) and leads to an increased probability of passing the NCLEX-RN exam.

Nurse's Touch

Nurse's Touch (NT) is an online product developed by Assessment Technologies Institute, LLC (ATI). NT includes tutorials, case studies, assessments, and interactive simulators that sharpen the professional and interpersonal skills needed to manage the emotional and physical demands that come with being a nurse. NT helps students learn to communicate effectively with clients, families, peers, and members of the interdisciplinary health care team; stay healthy and employ self-care activities; demonstrate professional behaviors and attitudes; utilize nursing informatics and technology; and become a leader and a client advocate.

NT contains five content areas including becoming a professional nurse, nursing informatics and technology, professional communication, wellness and self-care for nurses, and nursing leadership and management. Four of 5 modules (excluding leadership and management) include an online practice and a proctored assessment. The NT proctored assessments quantitatively measure a student's progress toward developing essential nursing skills using high-quality, live-action video to simulate sensitive, yet common scenarios nurses often experience in the clinical setting. NT is designed to help nursing students successfully resolve conflict, communicate vital information to clients, and develop the professionalism and leadership skills that will make them a respected member of the health care team.

RN Comprehensive Predictor

The ATI RN Comprehensive Predictor is a 180-item test designed to assess the nursing student's comprehension and mastery of basic principles including fundamentals of nursing, pharmacology, adult medical-surgical nursing, maternal newborn care, mental health nursing, nursing care of children, nutrition, leadership, and community health nursing. The percentage of questions from all major NCLEX client need categories (management of care, safety and infection control, health promotion and maintenance, psychosocial integrity, basic care and comfort, pharmacological and parenteral therapies, reduction of risk potential, and physiological adaptation) are similar to the percentage of questions on the NCLEX-RN and generates the following data: Individual Score (% Correct), Predicted Probability to Pass NCLEX-RN, National and Program Means, Individual Scores (% Correct) within Content Topic Categories, Topics to Review, and Individual Scores (% Correct) within an Outcome (Thinking Skills, Nursing Process, Priority Setting, NCLEX-RN Client Need Categories, Clinical Areas, QSEN, NLN Competency, and BSN Essentials). The student has 180 min (3 hours) to complete the CP assessment.

Relevance to NCLEX

A primary goal of nursing education programs is to prepare students to become competent, successful nurses. One measure of nursing program success is the NCLEX-RN pass rate. ATI provides schools with accurate, defensible measures of student proficiency through proctored testing (NT and CP). Academic nurse leaders and educators need quality measurements to help students reach their goal of becoming successful nurses by passing the NCLEX.

Methods

The goal of this study was to evaluate how participation in the NT program might help students prepare for the NCLEX exam. The authors examined the impact of completion of at least one NT module on student performance on the CP test. The study also focused on overall NCLEX readiness as well as performance on each NCLEX client need category. Proctored assessment data from NT and CP were utilized to conduct the study.

Analysis

Test scores from students who completed both the NT and CP assessments were compared using three types of analyses: 1) correlations between the NT and CP scores; 2) pre-post comparison of the CP scores before and after participating in NT; 3) pre-post comparison of the predicted probability of passing the NCLEX-RN before and after participating in NT. Pearson correlation coefficients and *t*-test statistical techniques were applied to conduct these analyses. The CP total scores as well as the sub-scale scores were evaluated.

Participants

NT participants were identified as students who took the NT proctored assessments in at least one of the NT content areas including 1) Becoming a Professional Nurse, 2) Nursing Informatics and Technology, 3) Professional Communication, and 4) Wellness and Self-care. The Leadership and Management module for NT was not included in this study since it does not have a practice or proctored assessment. NT participants who took the CP test 6 months after finishing at least one NT assessment were included in the correlation study. The test interval was specified to reduce possible confounding factors that might impact the relationship. Analysis was conducted to determine whether a correlation existed between the two tests. This analysis resulted in four samples for each NT content area collected between March 2013 to December 2019. Each sample contained at least 500 students including students from ADN, BSN, and Diploma programs.

Among the NT participants, some took the CP test twice with a first attempt occurring prior to taking the NT assessment, and a second after finishing the NT assessment. These data are helpful in evaluating the improvement of the CP performance via a pre-posttest analysis. To reduce the confounding factors of learning effect, only CP test data that had a short interval with the NT assessment were included in this study. The test interval is limited to 2 months, with the first CP taken 2 months before starting the NT program and the second CP taken 2 months after finishing the NT program. This resulted in a sample of 493 students collected from April 2015 to September 2019.

Results

The correlations between the CP total/sub-scale scores and the NT total scores on each content area are reported in Table 1. The correlations are positive and moderate. In general, the CP total score correlation is higher than the CP sub-scale scores with correlation values $r > 0.35$. The CP sub-scale score correlations ranged from $r = 0.15$ to $r = 0.40$. Out of the eight NCLEX client needs categories, the strongest correlation with the NT scores lies on sub-scale *Management of Care*.

TABLE 1. Correlation between Nurse's Touch and Comprehensive Predictor

	Becoming a Professional Nurse (N = 789)	Nursing Informatics and Technology (N = 692)	Professional Communication (N = 526)	Wellness and Self-care (N = 641)
CP Total Score	0.39	0.39	0.35	0.46
Management of Care	0.32	0.40	0.29	0.32
Safety & Infection Control	0.27	0.24	0.26	0.29
Health Promotion & Maintenance	0.24	0.22	0.24	0.26
Psychosocial Integrity	0.24	0.34	0.32	0.33
Basic Care & Comfort	0.20	0.21	0.21	0.36
Pharmacological Therapies	0.27	0.21	0.22	0.28
Reduction of Risk Potential	0.26	0.22	0.15	0.30
Physiological Adaptation	0.24	0.21	0.18	0.23

The pre-post comparison of CP scores via *t*-test analyses are reported in Table 2. Except for category *Health Promotion and Maintenance*, the mean CP total/sub-scale scores significantly improved after the NT program participation. The mean CP total score improved from pre-score of 70.6% to a post-score of 73.8%. This results in a statistically significant increase by 3.2% point, $t(492) = -12.87, p < 0.01$. The most improvement in the CP sub-scale score occurs for category *Safety and Infection Control* from a pre-score of 67.8% to a post-score of 73.2%. This is a significant improvement by 5.4% point, $t(492) = -9.11, p < 0.01$.

According to the ATI *probability of passing expectancy* table (ATI, 2020a), the predicted probability of passing NCLEX-RN associated with the total CP pre-score 70.6% is 88% probability and the probability of passing corresponding to the post-score 73.8% is 93% probability. On average, the participation of the NT program is associated with an increase of 5% probability of passing the NCLEX-RN.

TABLE 2. *Comparison of Comprehensive Predictor Total/Sub-scale Scores Prior to and after Completing Nurse's Touch*

	n	Before NT		After NT		Mean Gains	t	df	p
		M	SD	M	SD				
Management of Care	493	76.7	10.4	81.3	9.4	4.6	-8.80	492	< 0.0001
Safety & Infection Control	493	67.8	11.9	73.2	12.2	5.4	-9.11	492	< 0.0001
Health Promotion & Maintenance	493	66.9	14.4	68.2	14.6	1.3	-1.88	492	0.0606
Psychosocial Integrity	493	69.2	14.0	71.6	14.6	2.4	-2.93	492	0.0035
Basic Care & Comfort	493	66.8	15.4	68.8	15.0	2.0	-2.42	492	0.0160
Pharmacological Therapies	493	68.0	13.1	72.8	11.9	4.8	-7.96	492	< 0.0001
Reduction of Risk Potential	493	67.4	13.2	72.3	13.6	4.9	-7.49	492	< 0.0001
Physiological Adaptation	493	69.0	13.1	71.7	12.3	2.7	-3.80	492	0.0002
Total	493	70.6	7.5	73.8	7.5	3.2	-12.87	492	< 0.0001

Discussion

Effectively managing the physical, cognitive, emotional, and technological demands of nursing practice are essential skills for all nursing students and practicing nurses. These skills must be learned, practiced, and honed throughout a student's nursing education and transition into practice. NT immerses students in realistic clinical experiences to help them learn to communicate effectively and negotiate conflict; integrate self-care activities into their personal and professional lives; act in a professional manner; utilize technology; and become a vital and respected member of the health care team. The CP predicts the readiness of students to become an entry-level registered nurse and higher scores on the CP are positively correlated with greater potential success on NCLEX.

Results from this study revealed moderately positive correlations between completion of at least one NT assessment and CP scores. Results further indicated that the professional and interpersonal skills offered in NT are helpful in preparing students to become qualified entry-level nurses and provide a strong foundation for skill-building throughout their nursing career.

Results also indicated that participation in NT improves assessment performance on CP. The pre-post comparison analyses provide quantitative evidence for the efficacy of NT in preparing students' readiness for NCLEX-RN. Given the fact that the national average CP performance is 71.2% (ATI, 2020b), the increase of CP score from 70.6% to 73.8% implies a significant practical implication for student nursing school success. Score range around the mean score of 71.2% is where a typical (or average) nursing student would score on the CP. This range is where the bulk of students would score. Likewise, the probability range from 88% (associated with the pre-score) to 93% (associated with the post-score) is where nursing institutions are more likely to set the cutoff score for the CP test. Students below the institution CP cutoff score might be required to take remediation classes; however, the 5% probability increase might not represent a meaningful difference for students who are significantly above or below the institution cutoff score. Nevertheless, this increase tends to hover around the range of the probability scale where institutions are most likely to set their cutoff scores. Therefore, achieving such an improvement is very important for students to be on a positive trajectory for passing NCLEX-RN and entering their nursing careers.

Limitations

Participation in NT was defined as only those students who completed at least one NT proctored assessment. With limited access to institution curriculums, this assumption might not reflect the actual status of the product use. There might be scenarios where students participated in NT, but did not complete the proctored assessment.

It should be noted that the pre-post statistical comparison analyses are based on a convenience sample of NT and CP data sets. For reasons not fully known to the researchers, students attempted the CP test at least twice, with one prior to and another after the NT program. Data from these samples of data were extracted and utilized for assumed pre-post comparison purposes.

Finally, due to the lack of proctored assessment data in the content area of Leadership and Management, the NT data used in this study include only the other four content areas.

Conclusion

This study demonstrated that completing at least one NT proctored assessment leads to improved scores on the CP and subsequently results in an increased probability of passing the NCLEX-RN exam. These findings provide academic nurse leaders and educators with quality learning tools and quantitative measurements to help students reach their goal of becoming successful nurses by passing the NCLEX exam.

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