ORIGINAL RESEARCH

Predictors and students' perceptions of NCLEX-RN success in a BS program

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ABSTRACT

Background: First time National Council Licensure Examination-Registered Nurses (NCLEX-RN) pass rates and successful student progression in a program are considered key indicators of quality of nursing programs. The purpose of this study was to investigate the predictors of first-attempt NCLEX-RN success among multiple factors, and to explore the students' perception for NCLEX-RN.

Methods: A retrospective descriptive design was used including a total of 671 students who were admitted as a junior to the program between spring 2012 and fall 2015. Descriptive statistics and multiple logistic regression models were conducted to find significant predictors of first time NCLEX-RN success.

Results: Course grades for adult health, family health, critical care health, and the repeated course history, and HESI scores for adult health, family health, and the EXIT exam were significant predictors of NCLEX-RN success. Students perceived that the review course and practice test were helpful in passing NCLEX-RN.

Conclusions: Findings of this study would be beneficial for nursing programs to strategize effectively for students who are at risk of failing and support them in their NCLEX-RN preparation.

Key Words: NCLEX-RN, Predictors, Course grades, HESI scores

1. INTRODUCTION

A passing score on the National Council Licensure Examination-Registered Nurses (NCLEX-RN) is a requirement to work in a RN role in every state in the US. First time NCLEX-RN pass rates and successful student progression in a program are considered key indicators of quality of nursing programs and used by state board of nursing and accrediting agencies to assess a program's ability to meet standards.[1, 2] Thus, much attention is given to preparing nursing students to be successful on the NCLEX-RN and to predicting student success on this exam.

There have been many studies exploring the influencing factors of NCLEX-RN first time success. Among other variables, preadmission characteristics, admission variables, results of standardized tests, and grades in a program have all been evaluated as predictors of first time NCLEX-RN success. In relation to preadmission variables, the results from previous studies are not consistent. While several studies reported no significant association of NCLEX-RN first time success with either gender or age,[3–8] other studies reported significant differences in NCLEX-RN success by gender.[9, 10] Among admission related variables, Kaddoura, Flint, Van Dyke, Yang, & Chiang[11] tested the influence of previous degree status on NCLEX-RN success and found significant differences in NCLEX-RN success on first attempt between first-degree and second-degree accelerated Bachelor of Nursing Science program students, indicating second de-

gree students had higher pass rates compared to first degree students.

In regard to admission variables and grades while in a nursing program, pre-requisite grade point average (GPA),[12, 13] and cumulative GPA during a nursing program were found to predict NCLEX-RN success.[6, 10, 11, 13–20] Course grades were also found to be significant predictor of NCLEX-RN performance.[1, 8, 12] Failure history from a course (e.g., D or F grades) was also a significant predictor for NCLEX-RN results.[7, 8]

When introducing standardized tests in nursing program, most nursing schools in the USA use a commercially-prepared comprehensive examination. The Health Education Systems, Inc. (HESI) test is a frequently used standardized test, and tests are administered in a computerized format to simulate the actual NCLEX-RN exam situation. The effectiveness of the HESI exam as a significant predictor of first-time NCLEX-RN success has been reported in both national and local samples of nursing program graduates.[7, 11, 12, 17, 21–25] Other factors that have been to a significant influence on NCLEX-RN success include learning styles,[26] practice on standardized tests at start of the program,[21] test anxiety, contemplative practices, stress, concentration and self-efficacy on NCLEX-RN success.[27, 28]

In summary, previous research on predictors of first-attempt NCLEX-RN success provided evidence on this matter, but results are somewhat sparse and inconsistent. Most of the previous studies tested few potential predictors included in their study with a relatively small sample (sample size ranged from 100 to 200 in most studies). Further, none of the studies reported students' perceptions on NCLEX-RN preparation and on reasons for their success or failure. The purpose of this study was to explore the students' perception of the NCLEX-RN, and to investigate the predictors of first-attempt NCLEX-RN success among multiple factors, including preadmission/admission characteristics, nursing major course grades, and HESI results.

2. METHOD

2.1 Design

There are two phases in this study. The first phase of the study used a retrospective descriptive study design, and the second phase of the study used a survey design.

2.2 Setting

The setting of the study was a midsized public, traditional baccalaureate nursing program, which admits nursing students in the junior year. Students typically complete the nursing program within four semesters.

2.3 Sampling and data collection
2.3.1 *Phase 1*

The first phase was a quantitative analysis of potential predictors of achieving a passing score on the first time taking the NCLEX-RN. The first phase of this study was conducted using the existing administrative data of traditional undergraduate nursing students from a total of eight cohorts. Inclusion criteria included admission as a junior between spring 2012 and fall 2015, successful program completion within six academic semesters of admission, graduation and completion of the NCLEX-RN licensure exam prior to September 2017. A total of 671 students met these criteria (see Figure 1). The dependent variable was success (1) or failure (0) of NCLEX-RN on the first attempt.

2.3.2 *Phase 2*

The second phase of the study used a written survey to query students on their perceptions of NCLEX-RN preparation and taking the exam. The surveys were sent out between October and December of 2016 to the students who graduated in spring 2015 and fall 2015. The surveys were sent out between January and April, 2017 to the students who graduated in spring and fall of 2016. Starbucks gift cards ($10.00) were sent to subjects who completed the survey. The total number of nursing graduates who were invited to participate in this study was 355 and 102 graduates agreed to participate (response rate, 28.73%). Incomplete surveys were excluded resulting in 80 participants included in the final analysis (see Figure 1).

2.4 Measurements
2.4.1 *Phase 1*

Preadmission variables included students' age on the date of licensing exam, and gender. Variables related to admission included campus location (1 = main; 0 = satellite), admission status (1 = admitted from initial pool of candidates; 0 = admitted from wait-list), degree status (1 = second Baccalaureate degree; 0 = first Baccalaureate degree), admission type (1 = native to campus; 0 = transferred from alternate institution), overall GPA at time of acceptance to the program; pre-requisite course GPA (Biology, Anatomy and Physiology, Nutrition) and overall test of essential academic skills (TEAS) score.

The course grades from all major nursing courses, including nursing foundations, health assessment, adult health, pathophysiology-pharmacology, complex health, child health, family health, mental health, and community health were included in this study. Throughout the traditional program of four semesters, a student unsuccessful in any course may repeat that course. History of repeating any course is included. Course grades were based on the Uni-

versity's grading policy (A, A-, B+, B, B-, C+, C, D+, F, or FX), and students who receive D+ or below are considered as failure in the course.

Results from HESI testing were also included as variables. The nursing program design requires that students take a HESI exam that has been shown to be a good predictive for NCLEX-RN success[22] during each theory course associated with a clinical experience (foundations, mental health, adult health, family health, child health, and complex adult, HESI Exit exam). Each HESI examination is delivered twice during the semester. For this study, the highest recorded score for each course exam was included.
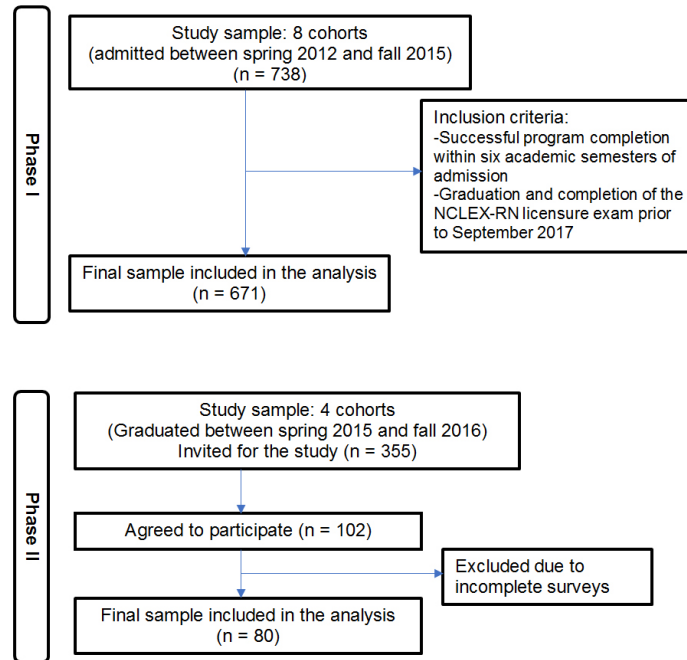
Figure 1. Flow diagram of the study process for Phase I and II

2.4.2 *Phase 2*

The data for the second phase was collected from a 12-item survey that investigators developed and sent to 355 nursing program graduates who completed the program between spring 2015 and fall 2016. The total number of nursing students who were invited to participate in this study included 355 students who graduated from the university's undergraduate nursing program between spring 2015 and fall 2016. This included four different cohorts, spring 2015 (n = 79), fall 2015 (n = 83), spring 2016 (n = 93), and fall 2016 (n = 100). The survey used the survey software (Survey Monkey®) and was sent to either the participants' institution affiliated email address or their personal email address. When the participants agreed to participate electronically, they were able to start the survey. The survey included Likert scale, open-ended, multiple choice and yes/no type questions. The items in the survey asked the participants their perceptions about preparing and taking the NCLEX-RN. Students were asked to note how they prepared for the NCLEX-RN exam. Students were also asked, why they thought they passed or did not pass the NCLEX-RN on the first try with open-ended

response. Questions on what the nursing program could have done differently to support them were also included with open-ended response.

2.5 Ethical consideration

Exemption review with minimal risk was approved from the Towson University IRB for the present study (#1606001058).

2.6 Statistical analysis
2.6.1 *Phase 1*

Descriptive statistics were used to show the distribution of demographic/admission characteristics, course grades, and HESI exam scores. Logistic regression models were conducted to find significant predictors of NCLEX-RN success. Separate models for course grades and HESI exam scores were used because course grades and HESI results are conceptually correlated with each other. Demographic/admission factors associated with NCLEX-RN success at $p < .05$ were included as covariates in the course grades and HESI models predicting NCLEX-RN success. The course grades were dummy coded to be entered to regression models as $0 = $ B-, C+, or C, and $1 = $ A, A-, B+, or B,

and the cut point (B) was decided based on the distribution of the dat. HESI scores were also dummy coded as 0 = below average and 1 = above or equal to average. Possible moderating effects of the variables were checked by conducting separate analyses with interaction terms, specifically with gender variable. Statistical analyses were performed using the STATA (version 15.1, StataCorp LP, College Station, TX).

2.6.2 Phase 2
The survey responses were categorized into the most common responses and the frequencies were counted.

3. RESULTS

3.1 Phase 1
Descriptive results from Phase 1 are presented in Table 1. Eighty-nine percent of the students were female, and 11%

were male. Approximately 88% of the participants passed the NCLEX-RN exam on the first attempt, and 12% of the students did not pass. The age when participants sat for NCLEX-RN ranged from 20 to 54 years old, and 91% of the students were less than or equal to 30 years old. The majority of the sample were Non-Hispanic Whites (67%), followed by Black/African Americans (16%), and Asians (9.1%). About 10% of the sample pursued nursing degree as their second bachelor's degree. Approximately 53% of the students transferred into the University from other institutions, and 90% were getting their first baccalaureate degree. The average pre-requisite GPA was 3.5, as was the GPA at time of the acceptance to the program. Means and standard deviations of the HESI scores are also presented in Table 1.

Table 1. Sample Characteristics

		N	Percentage (%)
Gender	Male	76	11.3
	Female	595	88.7
Age at NCLEX-RN	≤ 30	550	91.2
	> 30	53	8.8
Ethnicity	Asian	58	9.1
	Black/African American	104	16.3
	Hispanic	22	3.4
	Native Hawaiian/Other	2	0.3
	Non-Hispanic White	429	67.0
	Multiple	25	3.9
Campus	Main	533	79.4
	Satellite	138	20.6
Admission year	2012	158	23.6
	2013	155	23.1
	2014	173	25.8
	2015	185	27.6
Degree Status	First Baccalaureate degree	601	89.6
	Second Baccalaureate degree	70	10.4
Admission Status	Admitted from initial pool of candidates	519	77.4
	Admitted from wait-list	152	22.6
Admission Type	Native to campus	313	46.7
	Transferred from alternate institution	358	53.3
NCLEX-RN Result	Pass on first attempt	591	88.1
	Did not pass on first attempt	80	11.9
		Mean	**SD**
GPA at time of acceptance		3.5	0.27
Pre-requisite GPA (Biology, Anatomy and Physiology, Nutrition)		3.5	0.32
TEAS Score		80.4	6.73
HESI scores	Foundations	910.2	119.1
	Mental health	889.4	111.6
	Adult health	944.5	123.8
	Family health	936.7	117.6
	Child health	907.9	130.5
	EXIT	880.2	99.9

Note. GPA: grade point average; TEAS: test of essential academic skills; HESI: Health Education Systems Incorporated.

3.1.1 *Preadmission/admission Factors Related to NCLEX-RN success*

The multiple logistic regression model with preadmission/admission variables is presented in Table 2. The dependent variable which is NCLEX-RN pass/fail was coded as 1 "pass" and 0 "fail". The results indicate that gender and degree status were significant predictors of NCLEX-RN success. The odds ratio for the gender is 2.51 with a 95% CI (1.27, 4.96). This suggests that female students are 2.5 times more likely to pass the NCLEX-RN than male stu-

dents. The odds ratio for degree status is 8.81 with a 95% CI (1.15, 67.51), suggesting that those who pursued second bachelor's degree in nursing are 8.8 times more likely to pass the NCLEX exam than those who pursued nursing degree as their first bachelor's. Other demographic/admission factors, including age at NCLEX-RN, GPA, and TEAS score were not significant in the model. The model was statistically significant (LR Chi-squared [df = 9] = 23.00, *p* = .006) and accounted for 5.4% of the variance in the NCLEX-RN success.

Table 2. Preadmission/admission factors predicting NCLEX-RN success in multivariate logistic regression (N = 671)

	OR	SE	z	*P* > |z|	95% CI	
Gender	**2.51**	.87	2.65	.008	1.271	4.964
Age at NCLEX-RN	3.00	2.31	1.42	.155	.659	13.648
Campus	.88	.33	-.35	.728	.418	1.840
Admission Status	1.15	.37	.45	.656	.618	2.150
Admission Type	1.11	.31	.36	.716	.637	1.930
Degree Status	**8.81**	9.15	2.09	.036	1.149	67.509
GPA	1.36	.94	.44	.659	.348	5.289
Pre-requisite GPA	1.60	.88	.85	.394	.545	4.679
TEAS score	1.01	.02	.56	.573	.968	1.060

Note. Outcome variable was coded as 0 = fail, 1 = pass; OR, Odds Ratio; Gender coded as 0 = male, 1 = female; Age at NCLEX coded as 0 = ⩽ 30, 1 = > 30; Campus coded as 0 = satellite, 1 = main; Admission Status coded as 0 = accepted from wait list, 1 = accepted from initial pool; Admission Type coded as 0 = transferred from alternate institution, 1 = native; Degree Status coded as 0 = first Bachelor's, 1 = second Bachelor's degree.

3.1.2 *Course grades related to NCLEX-RN success*

The multiple logistic regression model with course grade variables is presented in Table 3. The results indicate that grades for adult health, family health nursing, complex health (critical care health nursing), and the repeated course history were significant predictors of NCLEX-RN success, controlling for gender and degree status. The odds ratio for adult health nursing is 2.36 with a 95% CI (1.16, 4.78). This suggests that those who received B or above for adult health nursing are 2.4 times more likely to pass the NCLEX-RN exam than those who received B- or below. The odds ratio for family health nursing is 4.05 with a 95% CI (1.80, 9.13), suggesting that those who received B or above for family health nursing are 4 times more likely to pass the NCLEX-RN exam than those who received B- or below. The odds ratio for complex health (critical care health nursing) is 2.28 with a 95% CI (1.09, 4.77). This suggests that those who received B or above for complex health (critical care health nursing) are 2.3 times more likely to pass the NCLEX-RN exam than those who received B- or below. The odds ratio for the repeated course history is 2.20 with a 95% CI (1.16, 4.19), suggesting that those who did not repeat any of the courses are 2.2 times more likely to pass the NCLEX-RN

exam than those who repeated any of the courses (e.g., failure, withdrawals). The model was statistically significant (LR Chi-squared [df = 12] = 92.69, *p* < .001) and accounted for 18.9% of the variance in the NCLEX-RN success. None of the interaction terms tested were significant.

3.1.3 *HESI scores related to NCLEX-RN success*

The multiple logistic regression model with HESI is presented in Table 4. The results indicate that HESI scores for adult health nursing, family health nursing, and EXIT (comprehensive exam) HESI were significant predictors of NCLEX-RN success, controlling for gender and degree status. The odds ratio for adult health nursing is 1.94 with a 95% CI (1.14, 3.29), suggesting that those who scored above or equal to the average for adult health nursing HESI are two times more likely to pass the NCLEX-RN than those who scored below the average. The odds ratio for family health nursing is 3.13 with a 95% CI (1.78, 5.51), suggesting that those who scored above or equal to the average for family health nursing HESI are 3 times more likely to pass the NCLEX-RN than those who scored below the average. The odds ratio for EXIT HESI is 2.18 with a 95% CI (1.25, 3.79), suggesting that those who scored above or equal to the average for EXIT HESI are 2 times more likely to pass the

NCLEX-RN than those who scored below the average. The model was statistically significant (LR Chi-squared [df = 8] = 67.23, $p < .001$) and accounted for 13.7% of the variance in the NCLEX-RN success. None of the interaction terms tested were significant.

Table 3. Course Grades Predicting NCLEX-RN success in Multivariate Logistic Regression (N = 671)

	OR	SE	z	$P > |z|$	95% CI	
Gender	2.29	.78	2.43	.015	1.172	4.458
Degree Status	7.75	8.01	1.98	.047	1.025	58.622
Foundations	1.17	.45	.41	.682	.553	2.474
Health Assessment	.91	.26	-.34	.730	.517	1.588
Patho-pharmacology	1.03	.35	.08	.938	.529	1.994
Adult Health	**2.36**	.85	2.38	.017	1.164	4.784
Community Health	.84	.22	-.65	.513	.497	1.419
Family Health	**4.05**	1.68	3.37	.001	1.796	9.127
Child Health	1.13	.44	.41	.678	.634	2.015
Mental Health	.60	.17	-1.79	.074	.339	1.052
Complex Health	**2.28**	.86	2.20	.028	1.093	4.771
Repeated History	**2.20**	.72	2.41	.016	1.159	4.196

Note. Outcome variable was coded as 0 = fail, 1 = pass; OR, Odds Ratio; Gender coded as 0 = male, 1 = female; Degree Status coded as 0 = First Bachelor's, 1 = Second Bachelor degree; All Grades coded as 0 = B-, C+, or C, 1 = A, A-, B+, or B; Repeated History coded as 1 = no repeated history, 0 = repeated any of the courses listed.

Table 4. HESI Scores Predicting NCLEX-RN results in Multivariate Logistic Regression (N = 671)

	OR	SE	z	$P > |z|$	95% CI	
Gender	2.29	.76	2.50	.012	1.196	4.379
Degree Status	8.88	9.15	2.12	.034	1.180	66.866
Foundations	1.11	.30	.38	.701	.653	1.887
Mental health	.81	.21	-.82	.415	.485	1.348
Adult health	**1.94**	.52	2.45	.014	1.142	3.292
Family health	**3.13**	.90	3.96	<.001	1.778	5.509
Child health	.93	.25	-.27	.788	.545	1.585
EXIT	**2.18**	.62	2.76	.006	1.254	3.799

Note. Outcome variable was coded as 0 = fail, 1 = pass; OR, Odds Ratio; Gender coded as 0 = male, 1 = female; Degree Status coded as 0 = first Bachelor's, 1 = second Bachelor degree; HESI scores coded as 0 = below average, 1 = equal to or above average.

3.2 Phase 2

Of the 355 total number of students who were eligible to participate, 170 (47.8%) emails were opened and 17 (4.9%) bounced because the email address was incorrect. The initial response rate is 28.7% based on the first-round emails sent. However, when excluding emails that were not opened and bounced, the response rate increased to 47%. The total number who agreed to complete the survey is 102. The actual number of surveys completed is 80. The majority of participants were from the most recent graduating class [spring 2015 (n = 12), fall 2015 (n = 20), spring 2016 (n = 21), and fall 2016 (n = 27)]. Out of the 80 students who completed the survey 67 passed and 13 did not pass the NCLEX-RN on the first try.

Participants' perceived experience in nursing program in preparing for the NCLEX-RN

Several common responses emerged from the question which asked why they thought they passed the NCLEX-RN on the first try: taking a review course (n = 22, 33%), aggressive use of practice questions (n = 19, 28%), and studying hard (n = 8, 12%). Among the students who did not pass on the first attempt in NCLEX-RN, the most common perception for the outcome was presented as not having enough practice questions (n = 5, 38%), followed by anxiety (n = 4, 31%), and did not study enough (n = 2, 15%). Findings from the question related to how the nursing program could have done differ-

ently to support them included administration NCLEX-RN practice questions from the beginning of the nursing program and continue the practice throughout the program (n = 20, 25%), having a review course on test taking strategies (n = 15, 19%), and giving more computerized exams to simulate the actual NCLEX-RN (n = 4, 1%).

4. DISCUSSION AND CONCLUSION

This study examined the significant predictors of NCLEX-RN success on the first attempt in a baccalaureate program and explored the students' experience of preparation for NCLEX-RN and taking the exam. The findings showed that, among the preadmission/admission variables, female gender and having a previous degree were significant predictors of NCLEX-RN success on the first attempt. These results are in line with several previous studies investigating factors associated NCLEX-RN success.[9–11] However, the majority of the previous studies investigating the influence of gender on NCLEX-RN success identified no significant associations.[3–8] Part of the reasons for these discrepancies in results might be the smaller sample sizes of previous studies compared to the current study. Type II errors (false negative) are more likely to occur when sample sizes are too small.[29]

We additionally tested for possible gender differences in both course grades and HESI scores. The results indicated that male students had significantly lower scores in family health and child health than female students. Further, it was interesting that both the course grade and HESI score in family health was the most significant predictor for NCLEX-RN success even after controlling for gender. This is consistent with previous a study's finding.[30] The moderation effect of gender on the association between course grades/HESI of family health and NCLEX-RN success was not statistically significant, indicating family health course grades and HESI scores were significant factors related to NCLEX-RN success regardless of gender. Considering the findings of this study, support should be given to both male and female students to improve their knowledge level and clinical skills specifically for family health and child health nursing courses. Also, given the findings from the additional analyses that male students had significantly lower scores in family health compared to female students, it is particular important to support male students in efforts to impact first time NCLEX-RN success.

Among the nursing major course grade variables, we found that receiving "B" or above for adult health, family health, complex health were significant predictors NCLEX-RN success. In addition, not repeating any course in the nursing program was a significant predictor of NCLEX-RN success on the first attempt. There are only scarce studies reporting the significant relationship between major nursing course grades and NCLEX-RN success. Two studies found that students with greater proportion of "C" or lower in their course grades tend to fail NCLEX-RN.[4, 11] Previous studies used overall course grades throughout the program, whereas we tested specific course grades separately in our analyses. Similarly, HESI scores of adult health and family health were significant predictors for NCLEX-RN success, and this is in line with previous studies results.[13, 30] Among other HESI exam scores, EXIT was found to be a significant predictor of NCLEX-RN success. This is also consistent with previous studies.[11, 30, 31] These findings suggest that students at risk of failing NCLEX-RN exam can be identified using these predictors in advance, and more educational support (e.g., early remediation, study group, tutoring) can be provided to help them succeed in NCLEX-RN exam.

While adult health, family health, and complex health was found to be significant predictors of NCLEX-RN success, other nursing major contents, including foundations, mental health, community health, or child health were not significant predictors in our analyses. Further, previous studies reported inconsistent results from current study, indicating nursing foundation was a significant factor for NCLEX-RN success,[13, 32] and another study found that pharmacology and community health nursing were powerful NCLEX-RN success predictors.[33] There might be many factors influencing these discrepancies in the study findings. For example, the study target population may have been different including, whether the students were second-degree or first-degree seeking. Variations in curriculum across study sites, may also have been different in different investigations.

The findings from the second phase of this study present students' perspectives of preparation for and taking the NCLEX-RN exam. Findings indicate that the review course provided by HESI and practice tests for NCLEX-RN (using HESI tests) were helpful in first time NCLEX-RN success. In line with this finding, a qualitative study related to NCLEX-RN success among second degree nursing students in accelerated program described that practicing NCLEXN-RN questions was the most helpful for their success and participating in an NCLEX-RN review course was also beneficial.[34] We also found that students perceived that the preparation for the NCLEX-RN needs to start at the beginning of the nursing program and to be continued throughout which demonstrates the students' attentiveness to NCLEX-RN success. Overall, the effectiveness of using standardized tests to impact NCLEX-RN success was noted in both the quantitative analyses and student survey results.

The findings of current study can be connected to the King's

Theory of Goal Attainment (TGA). The TGA was derived from King's Systems Framework for Nursing that describes the interrelationships between personal, interpersonal, and social systems.[35–38] The TGA describes the relationship between the nurse and the patient and the behaviors required to attain a specific goal. The relationship is a component of the interpersonal system. The TGA can be applied to the process of nursing education.[35] We propose that the nurse educator and the nursing student also form relationships and that the mutual goal is first-time student success on the NCLEX-RN. Students are expected to achieve specific milestones as they progress in the interaction phase of the TGA. Specific interaction milestones in the study included success in Adult Health, Family Health, Complex Health, and the HESI EXIT exam. We suggest that students should be afforded many opportunities to engage in remediation, test-taking, and other support with tutoring. Educators should provide support and be charged with identifying students who are at-risk and in need of additional resources.

While this study provides valuable information regarding influencing factors for NCLEX-RN success, there are some limitations. First, all of this study's data were collected in one traditional nursing program of a public university located in the East Coast of USA. Generalizability of the results might be limited because of lack of diversity in curriculums, student populations, and other student support programs. We also were not able to include some variables that been shown to predict NCLEX-RN success in other analyses, such as students' English proficiency or first language used.[19, 39] However, this study provided evidence on factors influencing NCLEX-RN success from a relatively large sample. Also, we included multiple variables in our analyses, including preadmission and admission variables, course grades, and the HESI results.

The findings of this study may be beneficial for nursing programs seeking to effectively admit, target and support students in passing the NCLEX-RN. In regards to admission variables, our results suggest that second degree students are significantly more likely than traditional students to be successful on their first NCLEX-RN attempt. Thus, programs may consider elevating applicants with a first degree as part of the admission process. It is also interesting to note, that in our analyses, neither the TEAS score nor pre-requisite or total admission GPA predicted passing the NCLEX-RN on the first attempt. While it may be premature to eliminate the TEAS score as an assessment tool for admission into a nursing program, this result suggests further consideration of use of the TEAS score. Our results are contrary to other's findings on the significance of pre-requisite GPA in predicting success on the NCLEX-RN and further investigations into this relationship may be warranted. Having a diverse nursing workforce is critical, and increasing the number of men in nursing is an important part of this diversity. Our finding that male students are less likely than female students to pass the NCLEX-RN on the first attempt suggest that offering remediation and/or practice sessions for male students may be particularly important. Our data also suggest that students who struggle in adult health, complex health, and family health classes and/or repeat at least one class may also be worthy targets for remediation and/or test taking strategies prior to taking the NCLEX-RN. The same is true of students who receive lower scores on adult health, family health and EXIT standardized tests.

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CONFLICTS OF INTEREST DISCLOSURE

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