

Nursing Students and NCLEX-RN® Success: Impact of a Standardized Review Course on Outcomes

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Conflict of Interest/Disclosure

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Learning Objective



The learner will:

- Discuss research strategies to promote evidence-based teaching in a standardized NCLEX-RN[®] review course.

Background

Success on the NCLEX-RN® has widespread ramifications for students, nursing schools and employers.

Stakes are high related to first time pass rates and review of the literature verified that student preparation for entry into practice is of great concern to

- **Nurse educators and schools** nationally and globally(Wells, 2003; Crow et al 2004; Higgins, 2005; Davenport, 2007; Siffert & McDaniel, 2007; and Carrick, 2011);
- **Graduating seniors and employers**(Beeman & Waterhouse, 2003; Spencer, 2006; Pine, 2007; Silvestri, Clark,& Moonie, 2013; and Atemafac, 2014).

Purpose

The purpose of this retrospective correlational pilot study was to identify:

- 1 Which characteristics of a standardized NCLEX-RN® Review Course impact NCLEX-RN® success?
- 2 Are the characteristics, class size, course placement, mandatory attendance, and confidence level associated with NCLEX-RN® success?
- 3 Describe the positioning within the curriculum of the standardized NCLEX Review Course and its relationship to the timing of the Exit Exam.

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Literature Review: Effect of Review Courses

Ashley and O'Neill (1991) found that a course focused on test-wisness and test content coaching resulted in over 93% success in NCLEX in their high risk group compared to the control group's 50% success. NCLEX pass rates were found to be significantly lower when students did not participate in a review course.

Crow et al (2004) identified specific program requirements and educational interventions used to promote including using standardized review courses. The findings were not as strong as those in the Ashley and O'Neill study.

Corrigan-Magaldi, Colalillo & Malloy (2014) found that a remediation program implemented during the semester break in an AD program to increase the pass rate on the NCLEX-RN of at-risk students was successful. Through the use of a course management system and an adaptive quizzing program, at-risk participants helped maintain this nursing program's pass rate.

Literature Review: Mandatory Attendance

Ross et al (1996) reported on their school's approach to require at-risk nursing students entering their senior year to develop a study plan, to discuss study options with a faculty coach and to sit for a mandatory NCLEX-RN review program. These authors concluded that if intervention programs for at-risk students are to be successful, they must be mandatory.

Mills, Wilson, & Bar (2001) suggest a student's ability to pass licensure depended upon attendance a strongly recommended specialized review course. Faculty found that strongly recommended attendance among their high risk students enhanced their success rates on the NCLEX-RN®.

Norton et al (2006) self-reported high NCLEX-RN® pass rates were due to a multi-pronged approach. One requirement was required attendance at a formal NCLEX-RN review course, Students were incentivized by reimbursement for costs for success on NCLEX-RN®.

Literature Review: Lack of Confidence

Silvestri (2010) in her dissertation found that high self-efficacy positively correlated with NCLEX-RN success. Correlation analysis revealed that all academic variables showed a positive correlation with self-efficacy expectations and negative correlations between the nonacademic variables and self-efficacy expectations.

Silvestri, Clark & Moonie (2013) in an article suggested that the more confident a student is and the more support systems available, the better he or she will perform on NCLEX®.

Farquhar (2014) published a qualitative study on the meanings that may be given to the lived experiences of graduate nurses who failed NCLEX-RN. Eighteen Registered Nurses who had failed the NCLEX-RN responded. Temporary decreased psychological and sociological well-being was associated with low self confidence and eventually evolved to knowledge seeking behavior and confidence and resultant success.

Literature Review: Class Size

Mitchell, Beach & Badaruk (1990) found that small classes (<20) in primary and secondary schools consistently scored significantly higher on achievement tests than the regular classes.

Arias & Walker (2004) studied the relationship between class size and student performance and found statistically significant evidence that small class size (< 24) has a positive impact on student performance in UG economics courses.

Kokkelenberg, Dillon, & Christy (2008) model how class size affects the grade that higher education undergraduate students earn and used 670,000 observations from a public university. Average grade point declines as class size increases, and gradually there are dis-economies of scale associated with a deterioration of student outcomes as class sizes grow larger

Literature Review: Class Size

Hattie (2009) conducted 800 meta analyses over a 15-year period on and found that a small reduction in class size(varied) had a large effect on outcomes in primary and secondary school performance with standardized tests in mathematics and reading.

Robb (2012) wrote an expert opinion which identifies that large class (>60) environments present multiple barriers for learning. Implementing creative strategies to establish student–teacher relationships, class engagement, and evaluation methods in large classroom settings are recommended to enable success.

Research Questions

1. Is mandatory attendance at a standardized review course associated HESI Exit (E2) or NCLEX-RN® Success?
2. Is class size of the standardized review course associated with E2 or NCLEX-RN® success?
3. Is positioning of the standardized review course associated with NCLEX-RN® success?
4. Is timing within the curriculum associated with NCLEX-RN® success?
5. Is high student confidence following a standardized review course associated with NCLEX-RN® success?

Methods

This exempt study was approved by the IRB of Texas Woman's University protocol # 17690

1 A retrospective correlational research design

2 Dependent Variable



First Time passage of NCLEX-RN®

3 Independent Variables



- Required attendance
- Class size
- Positioning of standardized exit exam (E2)
- Timing of the course in relation to graduation
- Confidence

Methods

Review Course

- Content review
- Practice critical thinking and test taking
- Peer and faculty interaction emphasis

Student post course questionnaire

- Satisfaction
- Confidence

Dean Questionnaires

- Demographic
- Scoring (NCLEX-RN results)

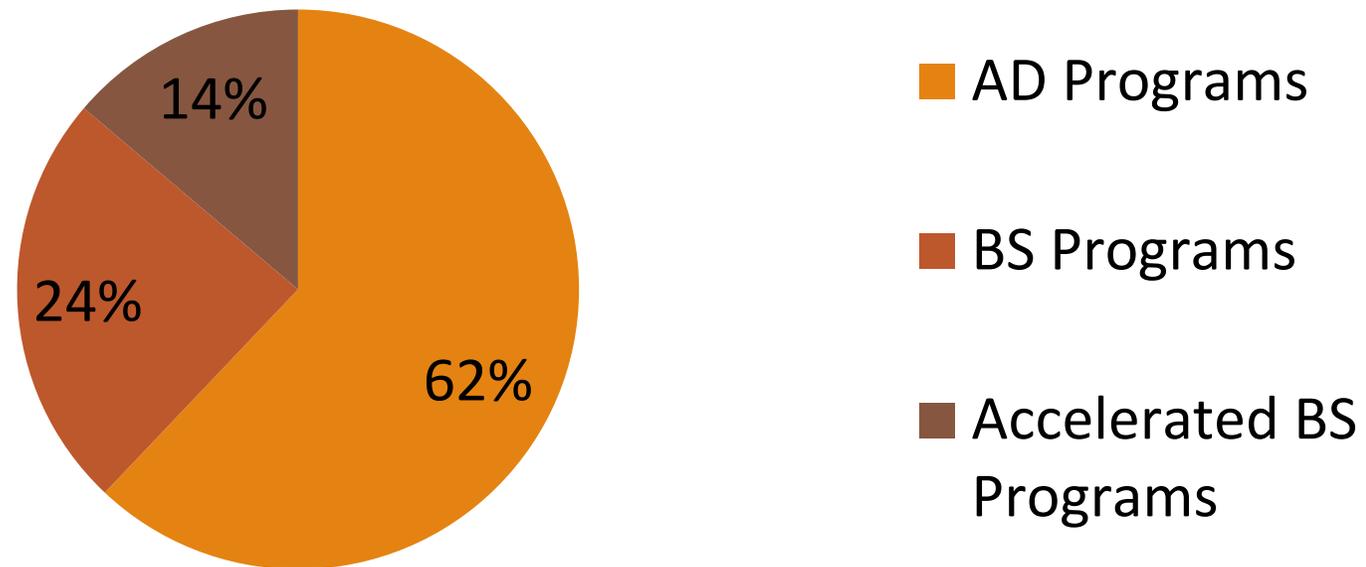
Sample

Existing data was abstracted from surveys of satisfaction from a convenience sample of graduating senior nursing students (n = 465) at the conclusion of a three day standardized NCLEX-RN review course.

Deans (n=29) responded to a request to participate in a 8 question on line survey which focused on review course positioning, review course attendance requirements, E2 benchmark requirements and NCLEX-RN[®] success.

Sample

Schools



Sample

Majority of participating programs (76%) required all students to attend the review course

Only 3% required attendance if benchmark was not made on Exit-2

Results: Question #1 Is Mandatory Attendance Associated with E-2 or Nclex-RN[®] Success?

Mean Comparison of Exit-2 Scores from Students in Programs Requiring Mandatory Attendance at a standardized NCLEX-RN[®] Review Course and those not requiring mandatory attendance

	N	Mean on E-2	Standard Deviation	t	p
Mandatory Attendance	527	892.7	118.1	3.576	<.01
Optional	250	860.8	112.6		

Results: Question #1 Is Mandatory Attendance Associated with E-2 or Nclex-RN[®] Success?

A chi-square test of independence demonstrated **no relationship** between required attendance at a standardized review course and NCLEX-RN[®] success

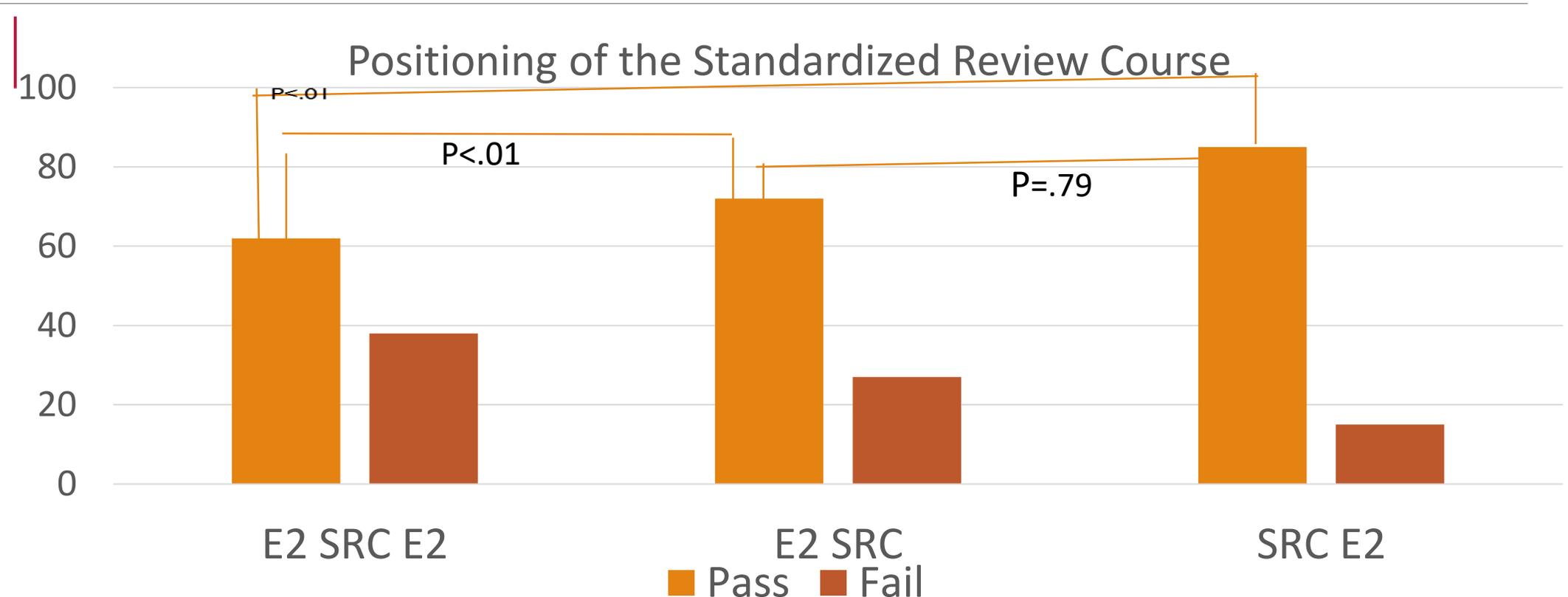
$$\chi^2 (1, N=746) = .1783, p = .7674$$

Results: Question #2 Is Class Size Associated with E-2 or Nclex-RN[®] Success?

Students attending courses with smaller class sizes (<60 students) scored significantly higher in the E-2 (X= 919.1) than those attending larger classes (> 60 students) (X=831.5).

There was no difference in NCLEX-RN[®] outcomes. The per cent of students passing the NCLEX-RN[®] was the same regardless of class size ($\chi^2 = .003, p = .958$)

Results: Question #3 Is Positioning of the Review Course in Relation to the E2 associated with NCLEX-RN® Success?



Students passed NCLEX-RN® at statistically higher rates when standardized exams were offered after the review course rather than before $p = <.01$.

Results: Q 4-Is Course Timing within the Curriculum Associated with NCLEX-RN® Success?

The timing of the Standardized NCLEX-RN® Review Course seemed to confer benefit on NCLEX outcomes. Statistically more students passed NCLEX-RN® when the review course was offered in weeks 1-9 prior to graduation compared with students who attended the week of graduation or 12 weeks prior to graduation.

$\chi^2 (1, N=497) = 29.22, p \leq .01$

Results: Q 5-Is Student Confidence Following a Review Course Associated with NCLEX-RN® Success?

There is a statistically significance in self-reported confidence mean 3.1/5 pre-course and 4.27 post-course t= 45.530, $p \leq .05$)



Conclusions

Data provides support for:

- A required standardized review course 1-9 weeks before graduation
- Students who attend a review course prior to an E2 achieve better results
- Students who are required to attend a review increase E2 scores by at least 30 points
- Confidence is associated with better NCLEX-RN® outcomes



Recommendations

Future research is recommended on identifying confounding variables associated with class size and intent to prepare post graduation.

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Thank you

