

Nursing Education Research Conference 2018 (NERC18)

Improving NCLEX-RN® Success: A Systematic Review of the Literature

Brenna Quinn, PhD, RN, NCSN, CNE

Megan Smolinski, SN

Anya Bostian Peters, PhD, MSN, RN, CNE

School of Nursing, University of Massachusetts Lowell, Lowell, MA, USA

Successful completion of the NCLEX-RN is important to both new graduate nurses and Schools of Nursing (SON); therefore it is crucial for nursing faculty to prepare students to pass this exam. SON cannot operate if enough students do not find success on this exam, and students failing the NCLEX-RN are at risk for anxiety, grief, and financial stress. Nursing faculty may struggle to identify what constitutes adequate preparation for the exam, or what strategies are most helpful to facilitating success. This poster reports results of a literature review aiming to identify effective approaches to strengthening NCLEX-RN success for pre-licensure nursing students. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines provided a framework for this review. The terms *NCLEX* and *success* were searched in the electronic database Cumulative Index to Nursing and Allied Health Literature (CINAHL). Sources illustrating successful NCLEX-RN preparation strategies for students were of interest for this review. Articles meeting the following inclusion criteria were included: available in the English language, published in peer-reviewed scholarly journals, and published between 2006 and 2016. Original research articles and discussion papers were included if they presented results related to student success or NCLEX-RN pass rate changes. If the article was a literature review or did not describe an intervention, the source was excluded. A nurse as first author limiter was applied. Of 243 non-duplicate sources identified through the database search, eighteen articles were included in final sample for this systematic review. Data were extracted and a summative content analysis was performed. Article characteristics (e.g. publication year, sample size) and variables of interest (e.g. NCLEX-RN success interventions, sample sizes, results) were extracted and organized in a data matrix. Five types of interventions were implemented to improve NCLEX-RN success: *exit exams*, *success strategies*, *curriculum change*, *progression policies*, and *faculty training*. Many SON have revised programs in order to better equip students for NCLEX-RN success. SON have worked to improve student critical thinking, test-taking skills, and psychosocial wellbeing. SON should consider multifaceted approaches to help students find success on the NCLEX-RN.

Title:

Improving NCLEX-RN® Success: A Systematic Review of the Literature

Keywords:

NCLEX-RN, critical thinking and nursing education

References:

Alizadeh, M., Karimi, F., Valizadeh, S., Jafarabadi, M. A., Cheraghi, P., & Tanomand, A. (2014). Investigation on relationship between test anxiety and academic performance of nursing and midwifery students in Tabriz and Maragheh, Iran. *Health, 6*(21), 3055–3061. <https://doi.org/10.4236/health.2014.621345>

Bonis, S., Taft, L., & Wendler, M. C. (2007). Strategies to promote success on the NCLEX-RN: an evidence-based approach using the ACE Star Model of Knowledge Transformation. *Nursing Education Perspectives, 28*(2), 82–87.

Brodersen, L. D., & Mills, A. C. (2014). A comparison of two nursing program exit exams that predict first-time NCLEX-RN outcome: *CIN: Computers, Informatics, Nursing*, 32(8), 404–412. <https://doi.org/10.1097/CIN.0000000000000081>

Carr, S. M. (2011). NCLEX-RN pass rate peril: One school's journey through curriculum revision, standardized testing, and attitudinal change. *Nursing Education Perspectives*, 32(6), 384–388. <https://doi.org/10.5480/1536-5026-32.6.384>

Claudette, M. F. (2014). Lived experiences of failure on the National Council Licensure Examination - Registered Nurse (NCLEX-RN): Perceptions of registered nurses. *International Journal of Nursing Education*, 6(1), 10. <https://doi.org/10.5958/j.0974-9357.6.1.003>

Cox-Davenport, R. A., & Phelan, J. C. (2015). Laying the groundwork for NCLEX success: An exploration of adaptive quizzing as an examination preparation method. *CIN: Computers, Informatics, Nursing*, 33(5), 208–215. <https://doi.org/10.1097/CIN.0000000000000140>

Davenport, N. C. (2007). A comprehensive approach to NCLEX-RN success. *Nursing Education Perspectives*, 28(1), 30–33.

Farley Serembus, J. (2016). Improving NCLEX first-time pass rates: A comprehensive program approach. *Journal of Nursing Regulation*, 6(4), 38–44. [https://doi.org/10.1016/S2155-8256\(16\)31002-X](https://doi.org/10.1016/S2155-8256(16)31002-X)

Frith, K. H., Sewell, J. P., & Clark, D. J. (2008). Best practices in NCLEX-RN readiness preparation for baccalaureate student success. *Nurse Educator*, 33(Supplement), 46S–53S. <https://doi.org/10.1097/01.NCN.0000336443.39789.55>

Gibson, H. A. (2014). A conceptual view of test anxiety. *Nursing Forum*, 49(4), 267–277. <https://doi.org/10.1111/nuf.12069>

Giddens, J. F., & Morton, N. (2010). Report card: An evaluation of a concept-based curriculum. *Nursing Education Perspectives*, 31(6), 372–377.

Griffiths, M. J., Papastrat, K., Czekanski, K., & Hagan, K. (2004). The lived experience of NCLEX failure. *The Journal of Nursing Education*, 43(7), 322–325.

Homard, C. M. (2013). Impact of a standardized test package on exit examination scores and NCLEX-RN outcomes. *Journal of Nursing Education*, 52(3), 175–178. <https://doi.org/10.3928/01484834-20130219-01>

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>

Jacobs, P., & Koehn, M. L. (2006). Implementing a standardized testing program: Preparing students for the NCLEX-RN. *Journal of Professional Nursing*, 22(6), 373–379. <https://doi.org/10.1016/j.profnurs.2006.06.004>

March, K. S., & Ambrose, J. M. (2010). Rx for NCLEX-RN success: Reflections on development of an effective preparation process for senior baccalaureate students. *Nursing Education Perspectives*, 31(4), 230–232.

McDowell, B. M. (2008). KATTS: A framework for maximizing NCLEX-RN performance. *Journal of Nursing Education*, 47(4), 183–186. <https://doi.org/10.3928/01484834-20080401-04>

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA statement. *Journal of Clinical Epidemiology*, 62(10), 1006–1012. <https://doi.org/10.1016/j.jclinepi.2009.06.005>

National Council of State Boards of Nursing. (2013). 2012 NCLEX pass rates. Retrieved from https://www.ncsbn.org/Table_of_Pass_Rates_2012.pdf

National Council of State Boards of Nursing. (2017). 2016 NCLEX pass rates. Retrieved from https://www.ncsbn.org/Table_of_Pass_Rates_2016.pdf

Nibert, A. T., Young, A., & Britt, R. (2006). The HESI exit exam: Progression benchmark and remediation guide. *CIN: Computers, Informatics, Nursing*, 24, 57S–61S. <https://doi.org/10.1097/00024665-200605001-00013>

Norton, C. K., Relf, M. V., Cox, C. W., Farley, J., Lachat, M., Tucker, M., & Murray, J. (2006). Ensuring NCLEX-RN success for first-time test-takers. *Journal of Professional Nursing*, 22(5), 322–326. <https://doi.org/10.1016/j.profnurs.2005.11.004>

Poorman, S. G., Mastorovich, M. L., Liberto, T. L., & Gerwick, M. (2010). A cognitive behavioral course for at-risk senior nursing students preparing to take the NCLEX. *Nurse Educator*, 35(4), 172–175. <https://doi.org/10.1097/NNE.0b013e3181e3393f>

Quinn, B. L., & Peters, A. (2017). Strategies to reduce nursing student test anxiety: A literature review. *Journal of Nursing Education*, 56(3), 145–151. <https://doi.org/10.3928/01484834-20170222-05>

Poorman, S. G., & Webb, C. A. (2000). Preparing to retake the NCLEX-RN: The experience of graduates who fail. *Nurse Educator*, 25(4), 175–180. <https://doi.org/10.1097/00006223-200007000-00013>

Roa, M., Shipman, D., Hooten, J., & Carter, M. (2011). The costs of NCLEX-RN failure. *Nurse Education Today*, 31(4), 373–377. <https://doi.org/10.1016/j.nedt.2010.07.009>

Røykenes, K., Smith, K., & Larsen, T. M. B. (2014). “It is the situation that makes it difficult”: Experiences of nursing students faced with a high-stakes drug calculation test. *Nurse Education in Practice*, 14(4), 350–356. <https://doi.org/10.1016/j.nepr.2014.01.004>

Schooley, A., & Kuhn, J. R. D. (2013). Early indicators of NCLEX-RN performance. *Journal of Nursing Education*, 52(9), 539–542. <https://doi.org/10.3928/01484834-20130819-08>

Sifford, S., & McDaniel, D. M. (2007). Results of a remediation program for students at risk for failure on the NCLEX exam. *Nursing Education Perspectives*, 28(1), 34–36.

Smith, J. E. (2002). Analysis of differences in entry-level RN practice by educational preparation. *The Journal of Nursing Education*, 41(11), 491–494.

Smith, J. E., & Crawford, L. H. (2002). The link Between entry-level RN practice and the NCLEX-RN examination. *Nurse Educator*, 27(3), 109–112. <https://doi.org/10.1097/00006223-200205000-00005>

Spalla, T. L., Nininger, J. M., & Daley, L. K. (2007). You’ve got mail: A new tool to help millennials prepare for the National Council Licensure Examination. *Nurse Educator*, 32(2), 52–54. <https://doi.org/10.1097/01.NNE.0000264331.40791.69>

Taylor, H., Loftin, C., & Reyes, H. (2014). First-time NCLEX-RN pass rate: Measure of program quality or something else? *Journal of Nursing Education*, 53(6), 336–341. <https://doi.org/10.3928/01484834-20140520-02>

Yeom, Y.-J. (2013). An investigation of predictors of NCLEX-RN outcomes among nursing content standardized tests. *Nurse Education Today*, 33(12), 1523–1528. <https://doi.org/10.1016/j.nedt.2013.04.004>

Abstract Summary:

The purpose of this systematic review poster is to report interventions Schools of Nursing can implement in order to strengthen NCLEX-RN success for pre-licensure nursing students.

Content Outline:

I. Purpose

A. Fostering NCLEX-RN success is of interest to Schools of Nursing.

B. Nursing faculty must take steps to support NCLEX-RN success, but may not know which interventions are most effective.

II. Methods

A. A systematic review of the literature was undertaken to identify interventions helpful in improving NCLEX-RN success.

1. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines directed this review.

2. The terms *NCLEX* and *success* were searched in the electronic database Cumulative Index to Nursing and Allied Health Literature (CINAHL).

a. Articles meeting the following inclusion criteria were included: available in the English language, published in peer-reviewed scholarly journals, and published between 2006 and 2016. Original research articles and discussion papers were included if they presented results related to student success or NCLEX-RN pass rate changes. If the article was a literature review or did not describe an intervention, the source was excluded. A nurse as first author limiter was applied.

3. Eighteen articles were included for review.

B. Data were extracted and a summative content analysis was performed.

III. Results

A. . Five types of interventions were implemented to improve NCLEX-RN success: *exit exams*, *success strategies*, *curriculum change*, *progression policies*, and *faculty training*.

IV. DISCUSSION

A. Many SON have revised programs in order to better equip students for NCLEX-RN success.

1. SON have worked to improve student critical thinking, test-taking skills, and psychosocial wellbeing.

2. SON should consider multifaceted approaches to help students find success on the NCLEX-RN.

First Primary Presenting Author

Primary Presenting Author

Brenna Quinn, PhD, RN, NCSN, CNE
University of Massachusetts Lowell
School of Nursing
Assistant Professor
Lowell MA
USA

Professional Experience: Dr. Quinn is an assistant professor at the University of Massachusetts Lowell School of Nursing. She has conducted and published several systematic reviews of the literature since 2013, and incorporates results of reviews in to her teaching practices.

Author Summary: Dr. Quinn is an assistant professor in the School of Nursing at the University of Massachusetts Lowell. Her clinical research area involves the health of schoolchildren with intellectual disability, however, she enjoys studying nursing theory and topics in nursing education in order to shape approaches to both teaching and research.

Second Author

Megan Smolinski, SN
University of Massachusetts Lowell
School of Nursing
Lowell MA
USA

Professional Experience: Miss Smolinski is an undergraduate nursing student at the University of Massachusetts Lowell. For this project, she participated as an undergraduate co-op scholar; an opportunity offered to high-performing students with interest in pursuing a career in research.

Author Summary: Miss Smolinski is an undergraduate nursing student at the University of Massachusetts Lowell. For this project, she participated as an undergraduate co-op scholar; an opportunity offered to high-performing students with interest in pursuing a career in research.

Third Author

Anya Bostian Peters, PhD, MSN, RN, CNE
University of Massachusetts Lowell
School of Nursing
Assistant Professor
Lowell MA
USA

Professional Experience: 2012-present Assistant Professor, University of MA Lowell, SON 2012 Assistant Professor, MA College of Pharmacy and Health Sciences, SON, Worcester, MA 2003-2011 Faculty, Delaware Technical and Community College, Stanton, DE 2001-2006 RN, Christiana Care Hospital, Newark, DE 1997-2001 RN, University of Maryland Medical System, Baltimore, MD 1994-1997 RN, UNC Hospital, Chapel Hill, NC Multiple presentations at regional and national conferences related to incivility in nursing.

Author Summary: Dr. Peters is a certified Nurse Educator who has taught in Associate, Baccalaureate, and Post-Baccalaureate programs. Her research areas are incivility in academia, with a special interest in faculty-to-faculty incivility, stress in the academic workplace, and the impact of incivility and stress on

faculty retention. Anya is an Associate in the Center for Women and Work at UMass Lowell and a member of the ANA Workplace Violence & Incivility Professional Issues Panel Advisory Group.