Adapting NCLEX-RN remediation during the COVID-19 pandemic

Sheryl K. House*, Stacie Sweet

Department of Nursing, Ohio University Zanesville, Zanesville, OH, USA

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ABSTRACT

Aim: Remediation is used by nursing programs to promote success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Evidence related to distance learning as a strategy for NCLEX-RN remediation is non-existent. The aim of this paper is to report the results of a remediation course converted to a virtual format from a traditional format due to the COVID-19 pandemic.
Method: Using an on-line meeting platform, at-risk students enrolled in a pre-licensure nursing program in the Midwest, United States, actively participated in a remediation course. Students met as a group and answered NCLEX-RN questions. The on-line platform allowed discussion among the instructor and students that promoted critical thinking related to nursing content and test-taking strategies. Students were also encouraged to complete NCLEX-RN questions outside of meeting times.
Results: Students voiced satisfaction with the method of course delivery and felt the course increased their knowledge and confidence in answering questions. The NCLEX-RN pass rate for remediating students was 77.8%.
Conclusion: A remediation course offered through distance learning proved to be effective in promoting NCLEX-RN success among at-risk students.

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The National Council Licensure Examination for Registered Nurses (NCLEX-RN) measures the required competencies of new graduate nurses to safely and effectively perform as an entry-level registered nurse (National Council State Boards of Nursing, 2018). Pass rates on the NCLEX-RN are used by communities, regulatory bodies, and accrediting agencies to determine the quality and effectiveness of prelicensure nursing programs. Therefore, success of graduates on their first NCLEX-RN attempt is a priority for nursing programs and has generated an emphasis to offer remediation to students who are identified at risk for not passing the examination.

Review of Relevant Literature

Historically, standardized examinations, grade point average (GPA), and course performance were found to be predictors of NCLEX-RN success (McKinney et al., 1988). Current literature maintains standardized test scores, GPA (Havrilla et al., 2018; Kaddoura et al., 2017), and course grades (Kaddoura et al., 2017) as significant predictors of success on the NCLEX-RN. According to Mee and Schreiner (2016) nursing schools continue to use these predictors to identify at-risk students.

The literature has not identified a specific teaching strategy to be most effective for remediation and more than one strategy should be included in remediation plans (Mee & Schreiner, 2016). Pennington and Spurlock (2010) stated that a remediation "prescription" is not supported by the evidence, and it remains unclear which remediation strategies have positive outcomes, and which do not (p. 490). Previous research has discussed the importance of providing interventions to high-risk students despite the lack of evidence supporting the efficacy of the interventions (Ashley & O'Neil, 1991).

Most nursing programs use multiple methods and strategies for remediation (Pennington & Spurlock, 2010). A systematic review identified common themes related to remediation, that were mainly based on student self-reports. Those themes included: students should develop individualized study plans, accept responsibility for NCLEX-RN preparation using resources, and use standardized tests to assist in identification of weak areas (Pennington & Spurlock, 2010). Custer (2016) discusses individualizing the approach and using student input and providing a challenging learning environment as strategies of establishing remediation.

The COVID-19 pandemic has created barriers to providing remediation for nursing students. In March 2020, due to the COVID-19 pandemic, the learning environments for most students attending institutions of higher education shifted from face-to-face to a distance learning environment. Distance learning, distance education, e-learning and online learning are terms often used interchangeably and involve "the physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-students communication" (Berg & Simonson, 2016, para. 1). Distance learning is a supported methodology for nursing education (Abuatiq et al., 2017) and is an option that

*Corresponding author.
E-mail address:* houses@ohio.edu (S.K. House).

increases access and allows greater flexibility for the learner (Lowery & Spector, 2014).

Background and Problem

Due to the COVID-19 pandemic a small regional university in the Midwest United States had to shift their remediation efforts to a distance learning environment to meet the needs of students preparing for their NCLEX-RN. An on-line platform strategy was implemented to allow continuation of remediation efforts for students identified at risk of NCLEX-RN failure. The literature related to nursing remediation in a distance learning environment is non-existent. The purpose of this article is to describe an approach to the identification of at-risk students and subsequent implementation of an NCLEX-RN remediation strategy in a distance learning environment due to the pandemic.

Remediation Strategy

At risk final semester undergraduate students were selected to participate in a structured remediation course during the final semester of the nursing program to provide them an opportunity for additional NCLEX-RN preparation. Students were selected based on course grades as well as results on HESI (Health Education Systems Incorporated) standardized nursing tests throughout the program that reflects the content on the NCLEX-RN.

Faculty reviewed grades from the previously completed medical-surgical courses and the in-progress capstone course. Students who minimally passed one or both medical-surgical courses and/or were failing or minimally passing the capstone course at the time of review were identified as potential students for the remediation course. Then, results on the HESI Fundamentals, Medical-Surgical, and Comprehensive Exit standardized exams were evaluated and used as additional criteria for selection. Final selection of students for the remediation course included those students with a course grade(s) that was minimally passing and below benchmark performance on one or more standardized exams. Selected students were sent an e-mail inviting them to participate in the remediation course. Participation in the course was voluntary and began mid semester during their capstone course and concluded when the last person enrolled in the course sat for their NCLEX-RN examination. This typically made the course extend approximately six weeks past the end of the semester.

The course was traditionally taught in-person and required active participation by students. However, due to the COVID-19 pandemic which impacted the on-campus presence of faculty and students, distance learning methods of remediation had to be implemented. There was no literature to support the most effective method for offering a distance learning approach, as a result, the instructor had to develop and implement an approach that was interactive, meaningful, and effective.

Students identified at risk were asked to meet with the instructor teaching the remediation course virtually at least twice weekly using Zoom as an on-line platform. Although the same learning resources were used in the face-to-face format, implementation of Zoom was new and provided an opportunity for student remediation that would not have been available because of the COVID pandemic. Due to the convenience of connecting remotely, sessions were able to be offered more frequently upon student request or instructor identified need. Unlike the face-to-face modality, it was more convenient to accommodate individual schedules, family commitments, and required less time and cost for students because they did not have to commute to campus.

During the first meeting the instructor discussed the course expectations and the importance of active participation during meetings to get the most out of the course. It was reiterated to students that they were all there for the same purpose. Active participation

was encouraged to make the experience more meaningful and promote success on the NCLEX-RN exam.

In the on-line platform, the instructor reviewed commitment to learning, motivation, accountability, and the impact each would have on student success. The instructor and students also reviewed the NCLEX-RN blueprint and identified the areas of higher concentration on the test plan. In addition, students were encouraged to discuss their fears and anxieties of taking the NCLEX-RN examination. Students began to discuss test-taking strategies, positive self-talk, and identification of personal areas of weakness based on standardized test results. Those weak areas on standardized testing were utilized to develop individualized student study plans.

Access to an electronic NCLEX-RN question bank was purchased by the nursing department for all remediation students. In subsequent virtual meetings, students and the instructor met using Zoom and began reviewing questions. The question bank was used to aid in student critical thinking skills, retention of information, and test-taking strategies. A small number of questions were used during each meeting. A quiz was generated focusing on the NCLEX-RN blueprint as well as overall identified weaknesses of the group.

As a group, students read the question on the computer screen and using the chat option, they privately communicated their answer to the instructor. This required each student to answer the question independently without knowledge of how the other students were answering the question. In the face-to-face modality students used index cards labeled one to five to select answers to the questions. In that environment, responses of each student were not confidential. By using the private chat option students' final answers were not influenced by seeing their peers' responses. This allowed students to identify their personal strengths and weaknesses at independently answering questions.

Once all students submitted their answer, the correct answer with rationale was displayed on the screen. The instructor facilitated discussion that promoted critical thinking related to the nursing concept and test-taking strategies. Students talked through their rationale for their answer choice whether it was the correct answer or not, as well as the test taking strategy/strategies they may have applied to answer the question.

The instructor and students discussed test taking strategies that would assist them to correctly choose the best answer(s). This included strategies like determining the most critical patient, determination of actual versus potential patient problems, identifying expected and unexpected responses, prioritizing care/interventions, and in some cases, determining if the answers were true or false.

The electronic NCLEX-RN question bank allowed missed questions to be reviewed for a second time. At the end of each session, all missed questions were reviewed again with the rationales to reinforce learning. Students actively participated in the review of missed questions by answering them again to promote retention of content covered in the questions.

In addition to attending the meetings, students were encouraged to complete practice exams outside of the meeting times using the NCLEX-RN question bank. The individual student practice exams focused on using the NCLEX-RN blueprint and identified individual areas of weakness based on standardized test performance. Students were highly encouraged to complete all the questions in the bank. The question bank also allowed students to retest using a bank of missed questions. Students were encouraged to retest on missed questions to reinforce the content they struggled to answer correctly the first time.

Outcomes

Nine students ($n = 9$) were enrolled in the course. Students were required to attend a minimum of five meetings. Two students only attended the five required meetings. Most students attended two

sessions weekly for approximately seven weeks. However, the instructor continued to meet with students who needed continued remediation for approximately six additional weeks.

As the course progressed, the instructor monitored the ability of students to answer questions correctly during meeting times and by viewing their progress within the question bank. The instructor was able to see the number of questions the students had completed, the content areas they were reviewing, and their performance on questions on independent practice exams.

When students self-identified as being prepared and confident they could pass the NCLEX-RN or when the instructor felt the student was ready to test, an individualized meeting was scheduled electronically. During the meeting, the instructor would discuss stress reducing strategies to assist the student the day before and day of testing. This included relaxation tips for the day of and the night before testing, ensuring a good night of sleep, eating a meal prior to testing, mapping out the drive time to the testing center and a variety of other strategies based on the student's needs and what they found to be most stressful about testing.

Ethical Considerations and Results

Collection of data related to NCLEX-RN outcomes was approved as exempt by the university institutional review board. All collected data for reporting the results of the remediation course were protected for privacy using general standards in place at the university following the guidelines of the Family Educational Rights and Privacy Act (FERPA). The overall NCLEX-RN pass rate for the entire graduating class was 94%. The number of at-risk students participating in the remediation course who passed the NCLEX-RN examination on the first attempt was n = 7 (77.8%). The two remediating students who failed the NCLEX-RN on the first attempt were the only two failures for the graduating class.

Those two failures were at-risk students who only attended the five required meetings. Both students tested despite the instructor's recommendation that they needed additional remediation and that they were not prepared to test. Additionally, these two students' performance was evaluated by the course instructor, and it was noted that these students failed to complete their assigned independent practice exams.

Through informal feedback, students verbalized satisfaction with the method of course delivery. They commented that the class assisted to increase their confidence in answering NCLEX-RN type questions and increased their knowledge in multiple content areas. Students reported that answering questions and reviewing those they missed then later answering those questions correctly, proved that they were retaining knowledge and increased their confidence. Students had also commented to faculty that they were appreciative for the opportunity to complete the course virtually because otherwise it would not have been an option due to the COVID-19 pandemic.

Limitations

This paper reports the results and experiences of a remediation course for at-risk students. The course is normally delivered in person. The project involved moving the traditional course to a virtual format and monitoring outcome data through first-time NCLEX-RN pass rates. Due to a lack of formal research methodology, our outcomes are not statistically significant, but the techniques used to deliver the course add to the nursing literature. As such, the results reported here cannot be generalized. Future research on the techniques used in the virtual course, over longer time periods, and with a larger population would be beneficial to nurse educators.

Conclusion

First time NCLEX-RN pass rates are an important part of nursing programs. Remediation of at-risk students has become a common practice at many nursing schools to improve overall pass rates. As stated previously, literature related to nursing remediation in a distance learning environment is non-existent. Despite the impact of the COVID-19 pandemic, a nursing program was still able to offer students an effective, interactive NCLEX-RN remediation course through distance learning that proved to be effective. However, further investigation could strengthen the body of knowledge regarding the effectiveness of virtual remediation options for NCLEX-RN preparation.

Declaration of Competing Interest

The authors did not receive any funding from agencies in the public, commercial, or not-for-profit sectors in the development of this manuscript. There are no conflicts of interest related to this manuscript.

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