Evidence-based Strategies for Standardized Exam Remediation in Nursing: An Integrative Review

LITERATURE REVIEW
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INTRODUCTION
PROBLEM
Many nursing programs utilize standardized exams to prepare nursing students for the National Council Licensure Examination (NCLEX), a licensing exam students must pass after graduation to become a registered nurse. The scores on standardized exams can give early indications if students need additional help. Some programs allow students to retake the standardized exam when a less-than-optimal score is initially achieved. To improve scores, students are encouraged or even required to perform remediation activities.

PURPOSE
This integrative review of literature aims to find evidence-based standardized exam remediation strategies and best practices that will be effective for helping students reach benchmark scores on standardized nursing exams and, ultimately, pass the NCLEX-RN.

SEARCH STRATEGY & METHODS
DATABASES SEARCHED
- Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- Education Resources Information Center (ERIC)
- Education Research Complete
- PsychINFO
- PubMed

SEARCH TERMS AND LIMITERS
- “Standardized exams” or “standardized test” or “HESI” or “ATI” and “remediation” and “nursing” or “nursing education” or “nursing student” (not) “admission” or “entry”
- The other limiters: English language; peer-reviewed

SCREENING PROCESS

Phase 1: Each article (n = 90) title and abstract was independently reviewed by two team members
Phase 2: Each remaining article (n = 50) was independently reviewed in full by two team members
Phase 3: Project lead reviewed each remaining article (n = 26) for methodological quality

DATA EXTRACTION AND ANALYSIS
The Matrix Method (Garrard, 2016) was used to extract information from each study according to purpose and design, sample and exam administration details, remediation strategies, remediation policies and consequences, results, and limitations. Extracted data were analyzed across the matrix for categories, generating categorical themes.

RESULTS

REMEDIATION STRATEGIES

SELF-GUIDED ASSIGNMENTS AND ACTIVITIES
- These activities consisted of structured modules or remediation packages from test companies, practice questions from NCLEX review books, adaptive quizzing, and online case studies from third parties.
- 54% of the articles (n=14) used this tactic, making it the second most popular approach.
- In one example, when they completed personalized quizzes, 13.5% more students reached the benchmark score (Presti & Santo, 2019).
- In another, more students from schools that completed case studies passed the NCLEX on the first attempt: 92.09% vs. 89.49% (Young et al., 2013).

FACULTY-GUIDED GROUP ACTIVITIES
- Activities typically involved a remedial course or seminar with some or all of the included: test-taking strategies, practice questions and exams, case studies, encouraging a test-ready mindset, and content review.
- This approach was described in 58% (n=15) of the articles.
- For example, comprehensive exit exam pass rates increased from 23% to 78% following implementation of group discussions of practice questions, including critical thinking and answer rationales (Cole & Adams, 2014).
- Some studies explored helping students build a test-ready mindset through strategies such as guided imagery, visualization, and reducing test anxiety.

FACULTY-GUIDED ACTIVITIES WITH INDIVIDUAL STUDENTS
- These strategies included the creation of individualized study plans, advising or tutoring, and interpretation of exam results.
- 38% (n=10) of the articles employed this tactic.
- In one scenario, the number of students who attained the benchmark increased from 30% to 89% and first-time NCLEX pass rate increased from 83% to 90% with a comprehensive remediation program that included study plans and individual faculty meetings (Frith et al., 2008).

SYNTHESIS AND IMPLICATIONS
Nurse educators should use a multi-modal approach when selecting standardized exam remediation strategies. Strong consideration should be given to the following:
- Self-guided assignments and activities: Structured modules or remediation packages from test companies; NCLEX-style practice questions; and case studies.
- Faculty-guided group activities: Test-taking skills; NCLEX-style practice questions; and strengthening the test-ready mindset.
- Faculty-guided activities with individual students: Individualized study plans.
- Comprehensive remediation policies should be implemented.
- Evidence is strongest for requiring remediation if a program-identified benchmark score is not met.
- Additional studies are needed to clarify which students may benefit most from retesting after remediation.
- Policies that delay progression if a benchmark score is not attained following remediation may improve outcomes but should be adopted with caution.
- Awarding credit for completing remediation may help reframe the process and build a culture that celebrates standardized exam success as a tool for NCLEX preparation.

Standardized exam remediation science has advanced very little in the past two decades. Future studies should use large, multi-program samples and use regression methodologies to control for potentially confounding variables and discern which components contribute most toward desired outcomes.

REMEDIATION POLICIES
REQUIRED REMEDIATION IF BENCHMARK SCORE IS NOT MET
- Most common policy among programs.
- 88.5% of the articles reported remediation was required when benchmark score was not attained on a standardized exam.
- Remediation was associated with increased NCLEX pass-rate.

REQUIRED RETESTING IF BENCHMARK SCORE IS NOT MET
- 69.2% of the articles featured retesting policies if benchmark scores were not met, with varying number of attempts allowed.
- Retesting was associated with improved standardized exam and/or NCLEX results.

DELAY IN PROGRESSION IF BENCHMARK SCORE IS NOT MET
- 69.2% of the articles featured delay in students’ academic progression (need to retake a course, failure to progress in the nursing program, being unable to graduate or take the NCLEX) if benchmark scores were not met.
- Benefit of this policy was significant in some studies.

CREDIT RECEIVED FOR COMPLETING REMEDIATION
- 27% of the articles reported programs that awarded credit hours for completion of a remedial course or weighted remediation completion in students’ final course grades.
- Results in standardized exams and/or NCLEX were significantly better.

We thank the Office of Research and Sponsored Programs for supporting this research, and Learning & Technology Services for printing this poster.