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Implementation of a Preparatory Student Success in First-Year BSN Students: A Quality

Improvement Project

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Abstract

Background: Completing nursing school is a challenging task for many students. Nursing schools and faculty are responsible for identifying barriers to student success and facilitating successful outcomes. The purpose of this project is to implement a preparatory student success course to assist nursing students with overcoming academic and social barriers.

Purpose: Implementing such a course will promote student success, which will have a positive impact on nursing students, faculty, institutions, and the current nursing shortage.

Methods: A student success course was delivered in an online modality during the first semester of an undergraduate BSN nursing program. Anonymous surveys were collected to assess the participants' perceived level of academic behavior confidence before and after implementation.

Results: There was a statistically significant improvement in the participants' academic behavior confidence after the implementation of the student success course.

Conclusion: Several studies have identified barriers and facilitators to student success. Promotion of student success is most beneficial before, or during, the first year of undergraduate nursing programs. The student success course used in this project improved the participants' perceived level of academic behavior confidence. It is highly recommended that the study is replicated with a larger sample size.

Keywords: Student Success, Nursing, Attrition, BSN, Quality Improvement, Education, nursing student, retention, nursing shortage

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Implementation of a Preparatory Student Success in First-Year BSN Nursing Students: A Quality Improvement Project

Transitioning from prerequisite courses into a formal baccalaureate nursing program can be difficult for many first-semester undergraduate nursing students. During the first semester of nursing programs, many students are faced with the task of learning how to study and balance the workload of nursing school. Student success resources may be offered in-person or virtually via synchronous and/or asynchronous formats. This project aims to implement and study an appropriate method for improving the overall academic success of first-year undergraduate nursing students. Statistics show nursing students' national attrition rate in some baccalaureate programs is as high as 50% (Elkins, 2019). Comparatively, the national nursing attrition rate is 20%, which is considered high and problematic (Elkins, 2019). High attrition rates—students quitting, or failing out of, nursing school—contributes to the national shortage of nurses in the United States.

Problem Statement

A recent study shows students view time management and good study habits as essential keys to success (Elkins, 2019), yet the first-year nursing student often struggles with time management, organization, critical thinking, studying, and note-taking strategies. Inefficiencies in time management, critical thinking, and study skills can directly result in poor academic performance (Elkins, 2019; Brown et al., 2021). Poor academic performance leads to student attrition, which contributes to the national and global shortage of nurses. According to Nursing Solutions, 22% of U.S. hospitals reported a vacancy of at least 10% of RN positions (Colosi, 2021). Academic failure (AF), a term used synonymously with attrition, results in increased costs and negative impacts on academic institutions and contributes to societies struggling with

the national shortage of nurses (Bulfone et al., 2019). Student retention and attrition in health care programs are global concerns (Brown et al., 2021). Nursing institutions must identify plausible solutions to student attrition to combat the global nursing shortage (Kubec, 2017).

Purpose of the Project

This project aims to test the effects of implementing a preparatory student success course for students on the cusp of beginning courses in an undergraduate baccalaureate nursing program. The project will measure the overall academic performance of students who take the preparatory student success course before the first semester of the undergraduate nursing program. The performance of those students will then be compared with the overall academic performance of those students who opted not to take the preparatory student success course before the first semester of the undergraduate nursing program. The results of this project will be used to help support the decision to consider implementing such a course as a feasible and necessary step in improving student success in a nursing program.

The Clinical Question

Students who take a preparatory student success course before beginning their first semester in a baccalaureate nursing program should perform better academically than those who do not. This inference is the basis for the theory for the clinical question. In first-year undergraduate nursing students, does taking a preparatory student success course, compared to not taking a preparatory student success course, result in higher overall academic performance at the end of their first semester?

Review of Literature

Literature Search Strategies

A systematic search was conducted via Galileo, which yielded results from databases such as CINAHL, Ovid, PubMed, ERIC, and Cochrane Library. The search was limited to articles published between 2016 and 2021 and included the disciplines of Education, Nursing & Allied Health to filter out irrelevant articles. The search included only full-text articles and scholarly (peer-reviewed) journals. Search terms student success AND nursing yielded 37,913 articles. Search terms student attrition AND nursing AND financial yielded 2,745 articles. Search terms student success AND nursing AND undergraduate AND attrition yielded 2,106 results. Search terms nursing student AND undergraduate AND success yielded 152 articles. Appendix A depicts the search strategies using a flow chart.

Articles used for the development of the review of literature were appraised and synthesized using tools from the Johns Hopkins Evidence-Based Practice Model. Of the 152 articles, 15 were selected to be included in the synthesis of evidence for literature review. The articles that were chosen to be included provided evidence supporting the need for implementation of the project. Articles were appraised using appendices from Johns Hopkins Nursing Evidence-Based Practice Model (JHNEBP). All articles included are Levels II, III, IV, or V evidence, with the majority considered Level III. A synthesis of evidence table is provided in Appendix F.

Overview

Due to the current global nursing shortage, one might think that attracting more nurses to the workforce would be a simple solution (Kubec, 2017), but many nursing programs have a waiting list of pre-nursing candidates (Elkins, 2019). The push to produce more nurses has also contributed to larger class sizes, impacting faculty's individualized attention to each nursing student (Kubec, 2017). As a result of the larger class sizes, high attrition rates in U.S. nursing

programs continue to be problematic (Elkins, 2019) for nursing faculty and institutions. Several studies seek to identify correlations between life stressors such as self-esteem and self-efficacy as they relate to the attrition of nursing students (Kubec, 2017). Studies also seek to identify facilitators to the successful completion of nursing programs (Graham, 2016). Strategies for student support address identified risk factors before they present as a barrier to student success (Merritt, 2021). Therefore, nursing faculty should be prepared to identify and address barriers as early as possible.

Factors Inhibiting Student Success

Factors that inhibit student success in undergraduate nursing programs may also be termed as barriers to student success. Risk factors that develop into an actual success barrier can result in attrition (Merritt, 2021). Students who are deemed “at-risk” due to academic and/or social obstacles have difficulty passing nursing courses or completing the program and often fail to seek support from faculty (Merritt, 2021). Bulfone et al. (2019) use the term AF, which is defined as students failing to complete a baccalaureate nursing program within four years. Responses from a study that investigated the experiences of students who were unsuccessful in completing a 4-year BSN program (Elkins, 2019) can be found in Appendix B.

The transition to the university itself can pose as a barrier to student success. Some of these issues include homesickness, underestimating academic workload, and learning new skills and expectations from the school, which all contribute to anxiety (Gray et al., 2019). According to Brown et al. (2021), nursing students reported higher anxiety levels with studying and test-taking than many other undergraduate students; therefore, stress, anxiety, and nervousness are all areas of concern for many student nurses (Brown et al., 2021). A mixed-methods study revealed that students consider BSN programs to be a demanding academic environment, which requires

support for work/life balance (McDonald et al., 2018). One literature review discussed unacceptable levels of student nurse attrition rates at a historically Black college in the Midwest, which were between 53% and 62% between 2007 and 2010 (Kubec, 2017).

Students can also be “at-risk” due to social determinants of health such as economic status, being educationally disadvantaged, racially or ethnically minoritized, and having English as a second language (Merritt, 2021). Although there are inconsistencies in evidence related to gender, some studies report higher attrition rates in male students than female students (Merritt, 2021). Barriers identified by minority nursing students—specifically Black, Filipino, American Indian, Asian, and Hispanic—include financial and work issues, lack of support from family or role models, inadequate preparation and study skills, and experiences with discrimination in the clinical setting (Graham et al., 2016). Studies show that students who work several hours a day during a nursing program are at a higher risk of AF (Bulfone et al., 2021). Military nursing students (i.e. Active-Duty, Reservist, and/or Veteran) often struggle with transitioning from a structured work environment to an academic setting (Cox et al., 2018). Due to the decrease in structure, MNS (military nursing students) are challenged with learning how to manage their time, think critically, and apply nursing knowledge (Cox et al., 2018). Barriers to veteran (one with former military obligations) student success include waiting until it is too late to ask for help, lower GPAs upon admission, and the general struggle of transitioning to higher education (Cox et al., 2018).

Faculty qualifications may also be a barrier to student success. A study revealed that nursing students had a lower perception of their faculty’s ability to hold their attention, organize, teach, and assess their abilities compared to other undergraduate students’ faculty (Brown et al.,

2021). Studies show a positive correlation between faculty development programs and increased student success in first-year nursing programs (McDonald et al., 2018).

Many studies have found higher student outcomes in blended (face-to-face combined with online modalities) learning than in traditional, face-to-face learning alone (Deka, 2021). Circumstances, such as a global pandemic that requires Emergency Remote Teaching (ERT), involve changing course modalities to fully online (Deka, 2021). Online learning was considered supplemental by many academic institutions until the COVID-19 global pandemic (Eltaybani, 2021). The abrupt transition from face-to-face to fully online learning created new challenges for student academic outcomes, such as poor overall student satisfaction and competency with online learning (Eltaybani et al., 2021; Deka, 2021). There are many pros and cons to online learning as well as different perspectives. Some studies revealed general student and faculty satisfaction with online learning in nursing programs, while only two-fifths of Philippino medical students considered themselves capable of engaging in online learning (Eltaybani et al., 2021). The term engaging refers to participating in online learning activities such as discussions with peers and faculty, which can enhance the online learning environment.

Strategies to Promote Student Success

Quality Improvement (QI) is a framework for a standardized way to improve a process. QI is as essential for nurse educators as it is for executives and front-line nurses (Kazana & Dolansky, 2021). The Institute for Healthcare Improvement (IHI) offers many online modules that include up-to-date materials and resources to facilitate faculty knowledge of QI concepts and skills essential to apply them within nursing education (Kazana & Dolansky, 2021). The QI framework known as the Plan-Do-Study-Act (PDSA) rapid cycle may be utilized by nursing faculty to integrate student success strategies into their curriculum (Kazana & Dolansky, 2021).

The PDSA framework is often used to provide structure when implementing and studying change in nursing education (Institute for Healthcare Improvement, 2021).

The professional development of faculty is essential to improving students' academic success (Brown et al., 2021). Examples of professional development in nursing education include attending nursing conferences and obtaining relevant degrees or certifications. Early intervention and support from nurse faculty are important in facilitating BSN students' success (Elkins, 2019). Both faculty and the university should support student resources (such as disability accommodations, tutoring services, and academic advising) which can increase the effectiveness of the services on student outcomes (Merritt, 2021).

Quality student success programs are implemented based on specialized student needs, such as first-year students and at-risk students (Harrell & Reglin, 2018). Strategies to promote student success are designed to prevent barriers by addressing them as risk factors (Merritt, 2021). Once a barrier is identified, early intervention and good faculty support are essential to ensure a student completes their BSN program (Merritt, 2021; Elkins, 2019). Student support strategies should be individualized; these include tutoring, advising, frequent, constructive faculty-student interaction, and social activities that promote student success (Merritt, 2021). Institutional expectations and commitment, support, feedback, and involvement encourage student persistence and retention (Harrell & Reglin, 2018). Studies reveal a positive correlation between academic and psychological counseling and a positive impact on a student's academic performance (Harrell & Reglin, 2018). Promoting the development of self-confidence in nursing students results in motivation for increased academic achievement (Brown et al., 2021). From a psychosocial standpoint, faculty should identify students experiencing or at risk for anxiety and

offer support strategies for intervention as soon as possible to reduce their risk for attrition (Brown et al., 2021).

Implementing pre-courses for student success strategies taught by experienced faculty supports academic success (Merritt, 2021). It is also imperative that nurse faculty remain unbiased and culturally competent to combat the issue of bias and discrimination in nursing programs (Graham et al., 2016). Institutions should also ensure faculty receive professional development training related to improved cultural competence with military nursing students (Cox et al., 2018). Cox et al. (2018) suggest including veterans within the faculty because they have personal experiences to better support military nursing students (MNS). Quality delivery of lectures and learning experiences (Deka, 2021) promotes positive student outcomes. Student outcomes are also affected by positive instructor characteristics such as enthusiasm, approachability, and clarity of explanations in lectures (Deka, 2021). According to a study conducted at a university in India, teacher characteristics had the strongest influence on student engagement (Deka, 2021). The Academic Nurse Self-Efficacy scale (ANSEs) can be used by faculty to test nursing students' level of self-efficacy (SE) (Bulfone et al., 2019) and support the needs identified that present as barriers to academic success. The ANSE also allows faculty to evaluate the effect of implemented teaching strategies and mentor support programs (Bulfone et al., 2019). Analysis of academic self-efficacy (ASE) helps promote students' academic success (Bulfone et al., 2019).

Essential Skills for Nursing Student Success

Faculty should collaborate with student support services to assist students with test-taking skills and studying anxiety (Brown et al., 2021). Time management is another skill that is essential to nursing students' academic performance (Harrell & Reglin, 2018) due to the

extensive workload compared to many of the prerequisite courses nursing students are required to complete. Time management skills, good study habits, and tutoring are crucial to student success (Elkins, 2019). A study conducted to analyze student satisfaction with success workshops revealed high participation related to test-taking tips, critical thinking skills, and final exam preparation (Merritt, 2021). Critical thinking includes a student's ability to analyze a patient's clinical data (Schub & Woten, 2018) to make an informed decision and is believed to be developed through the study of music (Kubec, 2017). Critical thinking skills are foundational in supporting nursing students' clinical reasoning and judgment (Schub & Woten, 2018).

Discussion

There is a current shortage of nurses in the workforce globally. Due to this issue, faculty are faced with the demands of teaching student nurses and ensuring that they are successful in passing the National Council Licensure Examination (NCLEX) to join the field as registered nurses (Kubec, 2017), increasing the number of competent members of the profession. Undergraduate BSN programs are very challenging, and the demanding workload often presents challenges that many students have difficulty adjusting to. In addition, several other stressors also inhibit student success. These factors include, but are not limited to, anxiety with studying and test-taking, difficulty adjusting to and relocating to a university, and meeting the demands of work/life balance while in nursing school (Elkins, 2019; Graham, 2016). Regardless of the stressors that affect student nurses, faculty are expected to facilitate student success. Several studies seek to identify a correlation between life stressors and early program attrition (Kubec, 2017). Early identification of risk factors and early interventions, such as scheduling tutoring appointments, is imperative to ensure student success. Implementing student success strategies during, or before, BSN students' first year of a program will promote student academic success.

Institutions should encourage faculty development and provide resources to assist instructors with providing individualized student support. There are several unforeseen circumstances, such as a global pandemic, that require an immediate change in course delivery from face-to-face to online. For this reason alone, faculty and institutions should prepare alternative options and resources that will ensure student success even in a worst-case scenario (such as the COVID-19 pandemic). Student learning styles are individualized and should be considered when assessing student success and making curriculum changes.

Many studies focus on both cognitive and noncognitive factors (i.e. employment and sense of belonging) (Kubec, 2017). There are many cognitive skills that nursing faculty should encourage to promote student success. Schub & Woten (2018) suggest that nursing students must possess critical thinking skills, which promote learning and application of clinical reasoning and judgment. Other cognitive skills include critical thinking, time management, study skills, and test-taking skills. Prioritizing and organization are two skills that are needed to study and manage time appropriately and adequately. A study discussed by Kubec (2017) and previous research regarding self-esteem and self-efficacy concerning attrition of nursing students revealed mixed outcomes. The study had limited generalizability due to the small sample size and was thus deemed insufficient to direct retention strategies on a student's grades, academic ability, and coursework alone (Kubec, 2017). Limited generalizability is a common finding among similar studies. There is a need to conduct more research on nursing student attrition and retention (Kubec, 2017). Many of the pilot studies can be used to replicate studies that expand to both larger sample sizes and multi-institutional sites (Kubec, 2017). Increasing generalizability will strengthen the evidence to support the implementation of some of the aforementioned student success strategies. Delivering a preparatory student success course in an online or hybrid

format will provide flexibility to allow more students the opportunity to participate in the course. Online data collection is feasible, easily distributed in a timely manner, has low costs, and provides ease of data entry (Eltaybani et al., 2021). These technological advantages will play a major role in influencing approval from faculty and institutions. Nursing faculty and institutions must be ready and willing to conduct or participate in, research to identify evidence-based solutions to help alleviate the current nursing shortage (Kubec, 2017). An online preparatory student success course can assist nursing students with the development of many of the skills that literature deems as key to student success. The pre-course may assist the student and/or faculty members with the identification of at-risk students and their risk factors. The objective of a preparatory student success course is to equip nursing students with tools to assist with success in such a rigorous educational discipline.

Conceptual and Theoretical Framework

There are several methods or conceptual frameworks available to improve processes in the field of nursing education. According to Garrett (2018), poorly rationalized practices, or practices not supported by evidence, are difficult to justify as beneficial change. A change theory is a systematic method for implementing and testing change (Institute for Healthcare Improvement, 2021). Using a change theory, such as the Plan-Do-Study-Act model, provides structure and explains the process of implementing a change, including gaining the support of key stakeholders such as directors and deans of nursing programs.

DNP Essential I: Scientific Underpinnings for Practice

This DNP project represents the application of DNP Essential I, which encompasses the foundation of nursing practice. As nurse faculty, one should prepare student nurses to practice as licensed professionals. Several sciences, including psychosocial and organizational sciences,

provide a foundation for nursing practice (AACN, 2006). Nurse faculty are charged with teaching student nurses how to apply foundational sciences and translate them into nursing science to provide safe and effective patient care.

Nurse faculty should continuously assess, implement and evaluate the curriculum of their programs to be sure that they are reflective of the current trends in health care (Laverentz & Kumm, 2017). Continuous quality improvement is the systematic, ongoing process of amending a workflow to achieve measurable, improved outcomes (Wilson & Schub, 2021). The process is contingent upon the customers and whether or not the proposed goals are achieved (Wilson & Schub, 2021). In the field of education, nurse faculty may think of students as customers. The changes implemented in nursing education focus on promoting improved student outcomes.

Plan-Do-Study-Act (PDSA)

The approach used for this project was a quality improvement. In nursing education, nurse faculty frequently use the Plan-Do-Study-Act (PDSA) model for change and to continuously improve current teaching methods (Murray, 2018). A figure displaying the Plan-Do-Study-Act (PDSA) Model for Improvement (Institute for Healthcare Improvement, 2021) can be found in Appendix C. The PDSA model addresses three main concerns for implementation: what is the change trying to accomplish, how is the change an improvement, and what change will result in an improvement (Institute for Healthcare Improvement, 2021). It serves as a blueprint to determine what changes will occur and how they will occur to improve the process in question. Before making a permanent change, both the current and proposed techniques must be tested and researched. Reasons to test changes include supporting the idea that implementation of the change will result in improvement, deciding which proposed changes

will result in the intended improvement(s), evaluating costs and impact of change, and minimizing resistance to the changes (Institute for Healthcare Improvement, 2021).

Project Objectives

Faculty will establish clearly defined goals before the implementation of any change to help guide the entire process. Although the desire to have all students successfully pass all courses during the first semester may be desirable, it is not necessarily a realistic goal. The goals for this project are to 1) decide how long the course should last, 2) identify specific content areas in the course, 3) identify resources to be included in the course, 4) define specific desired outcomes and identify a toolkit to measure the desired outcomes, 5) implement the course, 6) evaluate and disseminate findings of the project. The goals mentioned above are in chronological order and should occur over 12 months. The overall objective of the project is to implement the preparatory course, which should result in findings that support the proposal of implementing the course for future students in an effort to improve the academic performance of all undergraduate nursing students at the project site.

Aim Statement

The PDSA Worksheet from the Agency for Healthcare Research and Quality (2018) located in Appendix D provides detailed guidance for using the PDSA model and was used to identify all necessary components needed for implementing the project. The PDSA worksheet identifies the purpose of the project, which is to implement a change. Next, the aim statement addresses the targeted population, clearly stated goals, a plan to accomplish these goals, the relevance of these goals, and a prediction of the cycle length (AHRQ, 2018). The target population of this project includes students who are beginning their first semester of an undergraduate BSN nursing program. Participants are chosen voluntarily, via a convenience

sampling method. Participants include a diverse population such as both traditional and non-traditional students, military veterans and family members, and students working during the program. Students in the program are primarily non-Hispanic, Caucasian females, ages 20-24. The study will take place at an undergraduate, pre-licensure, baccalaureate nursing program at a university in Georgia, U.S.A. The university is located in the 2nd largest city in Georgia, 90 miles south of Atlanta. Although including other programs in Georgia may be ideal, only one university was included in this pilot study. The preparatory student success course is delivered in an asynchronous, online modality. Survey responses are obtained anonymously online as well. The project will measure the improved overall academic performance (i.e. academic behavior confidence score and course grades) of those students who take a preparatory course compared to those who opt not to take the course before the first semester of the undergraduate nursing program. This preparatory student success course is relevant in nursing programs because early intervention with strategies to combat barriers is key to student success. Although students bear most of the financial consequences of failing a course, this also has effects on governments, institutions, health service organizations, and clinical educators (Foo et al., 2017). Frequently, students who are “at-risk” of failing or being unsuccessful academically (failing to achieve a 75% course average) are not often aware of the degree that barriers may inhibit their education (Merritt, 2021). The course will run over four weeks, and an analysis of the results will occur after completing the student's first semester of the nursing program.

Plan

The first step in implementation is assessing the need for change and performing a literature search to support change and identify possible solutions. The plan for the implementation of the project includes several components. Students will take an online course

that will consist of modules focusing on skills that literature has deemed essential to the success of an undergraduate nursing student. The course will take place during the first semester of the nursing program. Although the course will be implemented in an online environment, it will be facilitated by a current faculty member. The course will also include some optional interaction between faculty and peers.

Prediction

Establishing a student success program and early identification of at-risk students has been shown to increase students' potential for success (Kubec, 2017). Implementation of this preparatory course was predicted to have a statistically significant impact on the outcomes of first-year undergraduate nursing students. It is predicted that the scores from the self-reported surveys will reflect improved academic behavior confidence after participation in the prep course and participants will pass the nursing course. The outcomes of the implemented course will support the decision to continue to use this course and consider it a mandatory prerequisite for the program.

Data Collection Plan

Before beginning the course, students will complete an anonymous survey assessing their perception of their competence and confidence in each course's content area. The content areas include time management, test-taking, studying, organization, critical thinking, and self-efficacy. The students completed a similar survey immediately after completing the course to reevaluate their competence and confidence in each academic behavior and were allowed an opportunity to provide additional feedback about the course. In December 2022, the participants completed another survey to assess how beneficial they perceived the course to be in aiding their success in

the courses taken during the semester. Lastly, the course grades of students who did and did not take the course were also included in the findings.

The data will be collected online, using a platform approved by Georgia State University's Institutional Review Board (IRB) as well as the project site's IRB. The surveys will consist of both qualitative and quantitative data. Quantitative data will be collected using a Likert Scale for each questionnaire item. The results of data collection will be displayed using charts, graphs, and diagrams that best represent each piece of data. Quantitative data will be used to support the presentation to key stakeholders and the decision to implement the course in the nursing program. Qualitative data will be presented as additional evidence to support implementation. Lastly, the data will influence the modality of the course and whether or not it becomes a mandatory component of the program's curriculum.

Do

Students will independently work through all modules in the online course. In the first module, students will learn about the importance of time management and how it correlates to balancing multiple nursing courses and outside activities. Organization skills align very closely with time management. Therefore, the organization module will teach students strategies to organize notes, manage class days and times, and keep up with assignment due dates and exam dates. The next module will provide students with information about test-taking strategies specifically for nursing school. The course will include examples of test questions along with the opportunity for students to practice test-taking strategies. The module on studying will include several study methods proven to be successful in nursing students' success including tools specifically aimed at studying for nursing courses. Critical thinking is a significant component of providing patient care, and it is a skill that nursing students will polish throughout

the entire program. The critical thinking module will introduce students to this concept and provide questions to begin practicing the skill. The last module will focus on academic self-efficacy. Higher levels of self-efficacy are associated with higher academic performance (Bulfone et al., 2019). In this module, students will assess their ability to achieve their educational goals and improve their self-efficacy. The course will also inform students of university support resources such as peer tutoring, counseling, and advising, which all help to promote student success (Merritt, 2021). The course modality will be an asynchronous, online format, and a current faculty member will facilitate it. Students will be able to interact via discussion board posts and will submit assignments pertinent to each module. The faculty will provide students with feedback on the course activities to enhance the benefits of taking the course.

Study

The surveys will provide feedback on how students felt about the concepts before taking the course versus compared to their feelings after completing the course. Students will rate each content area on a numerical Likert scale, with “5” being “very confident” and “1” being “not at all confident.” These results will provide some insight from the students’ perspective as to how beneficial the course is. Completing the survey after the first semester will provide deeper insight into how students felt the course influenced their academic performance. Lastly, comparing the course grades of students who took the course versus those who did not take the course will provide more statistical data to support the probability of improving student academic outcomes through the course implementation. Also, the results of data analysis will aid in identifying limitations and barriers of implementing the preparatory course.

Act

The final step of the PDSA is dependent upon the results and lessons learned during, and after completing, the project. During this step, the course design will be reevaluated and modified to improve efficacy and support. This data would be presented to key stakeholders at the university, to fully support the decision to implement the course for future undergraduate nursing cohorts. Key stakeholders at the project site include the current nursing faculty and the program director. The discussion will include supportive literature to elucidate the significance of the intervention and support implementation. Students who are unsuccessful in a course may also repeat the course (Merritt, 2021), negatively impacting the program and institution. According to Merritt (2021), all nursing programs admit students who are considered “at-risk.” Program directors and deans would be more likely to support a change that can decrease students' probability of unsuccessful courses.

Methodology

The methodology section of a research study describes the techniques used to answer the research questions (Polit & Beck, 2017). This section will discuss the research design, participants, setting, tools and interventions, data collection and analysis, results, and implications. The methodology fulfills the “do” and “study” components of the Plan-Do-Study-Act (Wilson & Schub, 2021) model through discussion of the intervention and analysis of the study results. A table depicting the project milestones is in Appendix H.

Design

The study is a quality improvement approach that used a quasi-experimental pretest-posttest research design. The data obtained via the anonymous questionnaires will be used to determine if a student success course has a significant impact on first-year baccalaureate nursing students' overall success by assessing academic behavior confidence, using the Academic

Behaviour Confidence (ABC) Tool. The study is designed to study the effects of introducing content that promotes student success during the beginning of a nursing program using self-reported academic behavior confidence.

Participants

Eligibility criteria may play an essential role in the outcomes of a research study and the generalizability of the results (Bisby et al., 2022). Eligibility criteria may also affect engagement or participation in a research study. The target population of this project includes students who have been accepted to and will begin their first semester of an undergraduate BSN nursing program in the upcoming semester. Participants include a diverse population, such as both traditional and non-traditional students, military veterans and family members, and students working during the program. Students in the program are primarily non-Hispanic, Caucasian females, ages 20-24. Students who are returning from previous semesters or repeating courses will be excluded. All newly accepted students will be eligible to participate. This study excludes minors (i.e. persons under 18 years of age) because we are testing the academic impact of a preparatory course on first-year baccalaureate nursing students.

The target sample size was 100, which was determined based on the average number of students accepted annually. The sampling methods were convenience sampling and snowball sampling. The recruitment flyer was dispersed to the students currently enrolled in the program via the school of nursing's e-mail listserv. In addition, the Student Nurses Association (SNA) of Columbus State University offered to provide volunteer hours for any students who chose to participate. Due to the student principal investigator's (PI) role as an instructor, participants were notified that participation is strictly voluntary and that there would be no penalty, such as a course average point deduction if they chose not to participate. Of the eighty-five students

accepted into the nursing program at the project site, eleven students expressed interest and provided informed consent. Of those eleven, eight enrolled in the course to complete the intervention and questionnaires.

At the end of the fall semester, of the 72 remaining students enrolled in the course, 57 were successful. Success is defined as achieving a course average of 75% or higher. All students who were considered “unsuccessful” either scored a course average of less than 75% or withdrew from the course. A chart depicting the distribution of grades from all students enrolled in the fundamentals nursing course is in Appendix F, Figure 2. A chart depicting the distribution of the participants’ grades in the fundamentals nursing course is in Appendix F, Figure 3.

Setting

The project site is an undergraduate, pre-licensure, baccalaureate nursing program at a university in Georgia. The project site accepts an average of 100 students each fall semester. The university is located in the 2nd largest city in Georgia, 90 miles south of Atlanta. Although including other programs in Georgia may be ideal, only one university was included in this pilot study. The preparatory student success course is delivered in an asynchronous online modality. Survey responses are obtained anonymously online as well.

Risk Management

Although there is no guarantee of passing a nursing course, this project is designed to benefit the participants and project site. Participating in this study will not expose participants to any more risks than they would experience in a typical day. No injury is expected from this study. There is a risk for low participation due to the desired study population and recruitment methods. The study flyer, welcome letter, informed consent, study materials, and gift cards will all be transmitted electronically. The student investigator is current nursing faculty for the

participants. This places the risk for participants to feel obligated to participate. In an effort to mitigate the identified risk, the investigator reiterated the fact of voluntary participation to all possible participants in the study documents and the welcome video within the course.

The informed consent notes that the course is not part of the project site's curriculum and participation in this study is strictly voluntary. The consent also highlights that the participants may withdraw from any time without any penalty. Communication regarding this study will occur only through electronic notifications. The course will also include an introductory welcome video reiterating that participation is voluntary.

Assumptions

The project implementation will occur in a virtual environment. Participants at the project site will be notified electronically of the opportunity to participate in the study, via email. All members of the project team will have access to the course; this includes Dr. Alan Jones and Dr. Marlene Call. All participants will have access to the course, which will include websites and questionnaires. All participants will be required to have access to an electronic device and the internet due to the technological requirements of the project site.

Tools

The instrument used for the questionnaire is the Academic Behavioural Confidence (ABC) Scale (Sanders & Sander, 2007), which is located in Appendix E. The ABC Scale is a 24-item questionnaire developed to assess students' self-efficacy, which has internal reliability and face validity (Sanders & Sander, 2007). The item responses are presented on a 5-point Likert scale. The content of the ABC scale assesses the participants' confidence in items including asking for help, passing assessments during the first attempt, asking the lecturer questions during lectures, reading recommended material, and attaining good grades.

Intervention

The study includes an online, independent course, which is the chosen modality for presenting educational information. The course is available to participants via Perusall.com, a free platform that allows the presentation of information in a user-friendly style similar to social media. Participants will complete four one-hour modules online. Over the four weeks, participants will visit a link to learn about time management, organization, studying, and test-taking, respectively. They will also be given a preimplementation, interim, and postimplementation questionnaire at the end of the semester. Each questionnaire includes the same questions from the ABC tool. It is anticipated that the ABC scores will improve each time.

Monitoring Plan

The monitoring approach that will be used is the lean methodology. Lean methodology involves removing complex processes that may inflict higher costs (Moran et al., 2020). Utilizing a completely online modality eliminates the need for printing, unnecessary travel related to the study, and study personnel. The website chosen for the study, Perusall.com, is a social media-like platform, which is free of charge for the researcher and participants.

Ethical Considerations

When collecting data online, ethical researchers must balance the potential benefits against potential harm as well as obtain approval from an Institutional Review Board (IRB) (Sipes et al., 2020). IRB approval was obtained from Georgia State University and the project site. Informed consent was received via email and stored in a folder on a password-protected computer. The informed consent documents will be available to only the student PI and will be shredded once the study is concluded. All survey results are anonymous and did not capture any identifiable information, such as names, IP addresses, or email addresses. To maintain

anonymity, each participant will choose a unique identifier that will be included on questionnaires instead of legal names. Publication or dissemination of study results will not include information such as student names, email addresses, or telephone numbers. Due to the participants being students, a family educational rights and privacy act (FERPA) letter was provided to the IRB at GSU and CSU. All participants were notified that participation is voluntary and there was no penalty for those who chose not to participate.

Data Collection and Analysis

Data collected using pretest and posttest surveys allows the investigator to measure the participants' progression in confidence (Kiegaldie et al., 2022). Three different time points were used for data collection: before completing the intervention (preimplementation), immediately after completion of the intervention (interim), and at the end of the fall semester (postimplementation). Participants were asked to complete the surveys using Qualtrics. The data collected for the study were retrieved from Qualtrics. The data was uploaded to IBM SPSS Statistics (Version 28), and text responses were transformed into numerical data. The data was analyzed using SPSS. The anticipated statistical tests included one-way analysis of variance (ANOVA), descriptive statistics, and statistical frequencies. A significance level of $p < .05$ was used to determine the significance of the difference in the ANOVA of the pre-implementation, post-implementation, and follow-up ABC Scores data. The assessment of assumptions of ANOVA provides insight into the reliability of the measurements. Course averages were retrieved retrospectively and analyzed for descriptive statistics and frequencies using SPSS.

Results

A total of 8 students (N) participated in this quality improvement project. All 8 participants completed the pre-implementation and interim surveys, but only 6 completed the

post-implementation survey. All of those who completed the post-implementation survey responded “yes” that the course was beneficial. Mean values are shown for the pre-implementation, post-implementation, and follow-up ABC Survey data (see Appendix F, Table 1). The pre-implementation data showed a mean score of 3.87 ($SD = .64$), the post-implementation data showed a mean score of 4.50 ($SD = .54$), and the follow-up data had a mean of 4.67 ($SD = .52$). The overall mean score for all three administrations was 4.32 ($SD = .65$). The trend observed in the scores was positive (see Appendix F, Figure 1).

An ANOVA was performed on the three sets of data to examine this trend and its impact on the outcomes (see Appendix F, Table 2). The ANOVA showed a statistically significant difference in the relationship between the pre, interim, and postimplementation scores [$F(2, 19) = 3.92, p = .037$].

Using the Tukey test, each individual relationship was explored for significance. The relationship between the pre ($M = 3.87, SD = .64$) and interim scores ($M = 4.50, SD = .54$) was not statistically significant ($p = .09$). The relationship between the interim and the postimplementation ($M = 4.67, SD = .52$) was not statistically significant ($p = .85$). However, the difference between the pre and postimplementation ABC scores was statistically significant ($p = .048$). This statistically significant difference in the pre and postimplementation ABC scores was clinically significant. A mean increase of 0.8 points was measured postimplementation after implementing the student success course. Eta squared was reported as the calculated effect. The effect was large with a value of $.292$.

Discussion

This study provided insight into a plausible strategy for promoting nursing students' success to combat student attrition. The findings indicated that first year nursing students who

participate in a preparatory student success course might be less likely to fail a first-semester course. According to the survey results, there was a significant improvement in students' perceived academic behavior confidence after the intervention. It is inferred from the results of the data analysis that the intervention was beneficial. All except one of the participants successfully passed the fundamentals nursing course. It is worth noting that the one unsuccessful participant withdrew from the nursing course prior to the end of the term.

Nursing students often struggle with several barriers to success, especially during their first semester of the program. Successful completion of a baccalaureate nursing program requires competency in skills such as time management, organization, test-taking, note-taking skills, and many others. Many students are unaware that they are at risk of failing until it is too late; therefore, faculty members must be knowledgeable about identifying these potentially at-risk students as soon as possible. Early intervention for preventative success barriers (i.e. poor time management and study skills) is key to students' success. Equipping a nursing student with time management skills before they realize they need them is planning for success. A student success course may highlight specific resources available within the institution, such as counseling services or disability accommodations overcome newly identified obstacles such as testing anxiety for example.

Students who exhibit behaviors that represent academic confidence are more likely to succeed in nursing school. The ability to ask questions during lectures, arrive at class on time, attain good grades and study independently promotes favorable academic outcomes. Students who are lacking certain academic behaviors often does correlate with poor student performance. For example, if a student is habitually late or not confident in their ability to arrive to class on

time, a nursing faculty should perceive this as a potential or actual barrier to their academic success.

Limitations

The study had a small sample size, which may not be representative of the demographics of the entire population of students in undergraduate baccalaureate nursing programs. The study was limited to one university, making it difficult to generalize the results. Not all scores from the pre-course, post-course, and follow-up surveys could be paired due to missing unique identifiers, which prevented performing a repeated measures ANOVA. The statistical analysis compared the participants as a group instead of individual scores over time. Beginning implementation after the fall semester began also had a negative impact on participation. Many students decided not to participate in the study due to the fear of a perceived lack of time for coursework. There is also a lack of evidence about methods and strategies that promote nursing student success or retention, indicating a significant need for more contributions to research.

The participants were enrolled in four nursing courses during the first semester. The survey featured course averages from the primary clinical, didactic course. The study failed to follow the students' performance in the other courses, previous grade point averages (GPAs), and averages from the co-requisite courses from the semester. Finally, the study did not capture other influencers, such as faculty characteristics such as level of nursing degree and years of experience as nursing faculty.

Implications for Practice and Recommendations

Studies have reported that most students who fail to complete nursing programs are often unsuccessful during their first year of the program (Elkins, 2019), which is why early faculty intervention for student barriers is crucial. According to Gartrell et al. (2020), limited

information about what predicts success in a nursing program is available. Several factors influence nursing students' academic performance, such as demographics, mental health, behavior (i.e., arriving to class on time, or reviewing content before a lecture), and cognitive development (Brown et al., 2021). Ensuring the availability of resources that promote student success is essential in undergraduate nursing programs. This study aims to evaluate the impact of implementing a student success course for first-year baccalaureate nursing students. Research supports the need for interventions such as the one introduced in this study. Although it cannot be guaranteed that students will be academically successful, it is imperative that nursing faculty attempt to promote student success through a multitude of resources. Replication of this study must follow both students who participated in the intervention and those who chose not to participate or dropped out during the study (Terp et al., 2022).

It is highly recommended that nurse faculty identify barriers to a student's success early within a nursing program. Implementing a preparatory student success course resulted in favorable outcomes in this study, meaning at least half of the participants successfully passed their nursing course. After completing the study, the participants also resulted in improved self-reported confidence in the academic behaviors studied per the ABC scores. The study should be replicated to include all other levels of nursing education and a larger sample size. Equipping first-year nursing students with tools for success helps in increasing student retention. There is an unequivocal need for research related to promoting nursing student success. Future studies should explore more aspects and demographics of the selected population and performance in other nursing courses. The author also encourages an assessment of the faculty qualifications and student success resources currently available, per the literature.

Dissemination of Findings

Completion of this doctoral project provided the author with innovative insight related to the promotion of academic success for first-year pre-licensure nursing students. The findings are pertinent to and will be shared with, stakeholders (nurse educators and leaders) at the project's site. The author also plans to disseminate the project's findings through a poster presentation at the Georgia Nurse Leader's Coalition's (GNLC) DNP Symposium. Additionally, the author plans to publish the project in a relevant scholarly journal.

Conclusion

The ongoing nursing shortage is a worldwide issue that requires a collaborative effort for plausible solutions. Student attrition continues to impact the nursing shortage by limiting the number of aspiring registered nurses eligible to obtain licensure through successfully passing the NCLEX. Several factors affect a student's ability to be successful in a pre-licensure program. These factors may be student-dependent (such as poor time management skills), related to the qualifications of faculty, or student resources available at a university. Both faculty and nursing students should be equipped with tools that promote success. Early identification of risk factors and interventions for those students who are considered at risk is key to student retention and success. Although this doctoral project focused primarily on first-year baccalaureate nursing students, it can be applicable to all levels of pre-licensure nursing students as well as other disciplines of collegiate studies.

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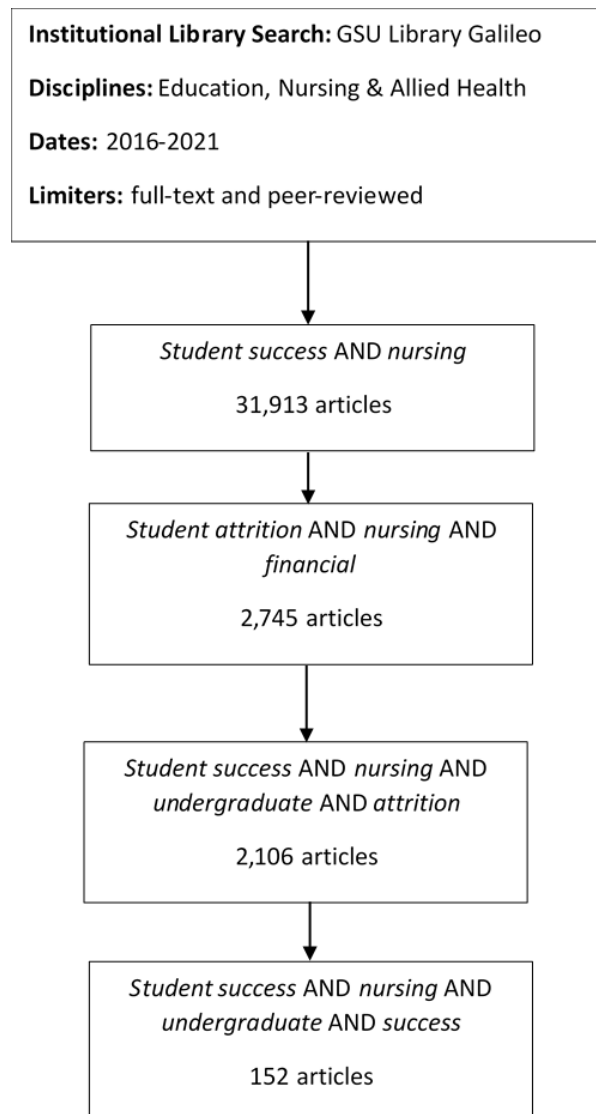
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Appendix A

Literature Search Strategies



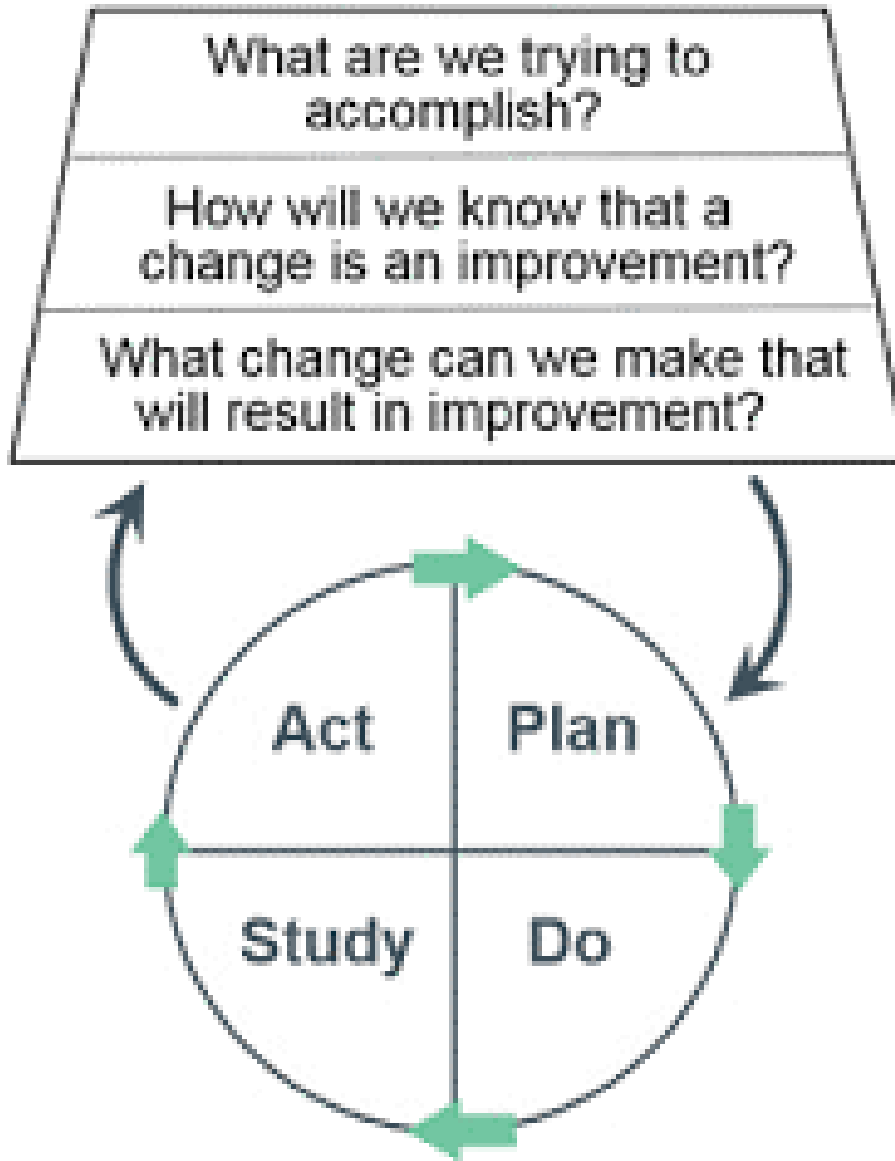
Appendix B**Excerpt of Student Responses from Qualitative Study (Elkins, 2019)**

- “I didn’t realize I was failing until it was too late.”
- “...by the time I realized that I had to study, it was too late.”
- “I had difficulty finding a babysitter to attend class and clinicals.”
- “I think the hardest parts were the exams.”
- “I think a lot of students do not understand what nurses do and what the school consists of.”
- “A class to prepare you for the BSN nursing program would have been helpful.”
- “Faculty were nice, but they were not very personal.”

Appendix C

Plan-Do-Study-Act Model, Institution for Healthcare Improvement

Model for Improvement



Appendix D

Plan-Do-Study-Act Worksheet, AHRQ

PLAN DO STUDY ACT (PDSA) FORM

Project Title:

State:

Objective of this Cycle:

Develop a Change Test a Change Implement a Change

Cycle #:

Start Date: **End Date:**


Project Lead:

Task-related; Task:

Internal Process

Aim Statement (WHAT YOU ARE TRYING TO ACCOMPLISH):

- Specific- targeted population:
- Measurable- what to measure and clearly stated goal:
- Achievable- brief plan to accomplish it:
- Relevant- why is it important to do now:
- Time Specific- anticipated length of cycle:

PLAN 

Test/Implementation Plan (THINK ABOUT WHAT CHANGES YOU CAN MAKE THAT WILL RESULT IN IMPROVEMENT):

What change will be tested or implemented? Include how change will be conducted, who will run it, where it will be run and when it will be run unless already noted in Aim Statement above. (If needed, include specifics on tasks, responsibilities and due dates.)

.....

Prediction:

.....

Data Collection Plan (THINK ABOUT HOW YOU WILL KNOW THE CHANGE IS AN IMPROVEMENT):

What data/measures will be collected?

Who will collect the data?

July 24, 2014 Credit to IHI Open School for Health Professionals for original form. Modified for Telligen Use.

Page 1
Revised: 02/11/2015

When will the collection of data take place?

How will the data (measures or observations) be collected and displayed?

What decisions will be made based on data?

DO



Activities/Observations

Record activities/observations that were done in addition to those listed in plan (above):

STUDY



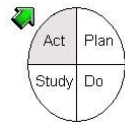
Questions: Copy and paste Prediction from Plan above and evaluate learning. Complete analysis the data. Insert graphic analysis whenever possible. whenever possible.

Prediction:

Learning (Comparison of questions, predictions, and analysis of data):

Summary: Look at your data. Did the change lead to improvement? Why or why not?:

ACT



Describe next PDSA Cycle Based on the learning in "Study," what is your next test?

Appendix E

Academic Behavioural Confidence (ABC) Tool (Sanders & Sander, 2007)

Appendix 1: How confident are you that you will be able to:

1. Study effectively on your own in independent / private study	Very confident	Not at all confident
2. Produce your best work under examination conditions	Very confident	Not at all confident
3. Respond to questions asked by a lecturer in front of a full lecture theatre	Very confident	Not at all confident
4. Manage your work load to meet coursework deadlines	Very confident	Not at all confident
5. Give a presentation to a small group of fellow students	Very confident	Not at all confident
6. Attend most taught sessions	Very confident	Not at all confident
7. Attain good grades in your work	Very confident	Not at all confident
8. Engage in profitable academic debate with your peers	Very confident	Not at all confident
9. Ask lecturers questions about the material they are teaching, in a one-to-one setting	Very confident	Not at all confident
10. Ask lecturers questions about the material they are teaching, during a lecture	Very confident	Not at all confident
11. Understand the material outlined and discussed with you by lecturers.	Very confident	Not at all confident
12. Follow the themes and debates in lectures.	Very confident	Not at all confident
13. Prepare thoroughly for tutorials.	Very confident	Not at all confident
14. Read the recommended background material.	Very confident	Not at all confident
15. Produce coursework at the required standard.	Very confident	Not at all confident
16. Write in an appropriate academic style.	Very confident	Not at all confident
17. Ask for help if you don't understand.	Very confident	Not at all confident
18. Be on time for lectures.	Very confident	Not at all confident
19. Make the most of the opportunity of studying for a degree at university	Very confident	Not at all confident
20. Pass assessments at the first attempt.	Very confident	Not at all confident
21. Plan appropriate revision schedules.	Very confident	Not at all confident
22. Remain adequately motivated throughout.	Very confident	Not at all confident
23. Produce your best work in coursework assignments	Very confident	Not at all confident
24. Attend tutorials	Very confident	Not at all confident

Appendix F

Evidence Synthesis Table

Date: 10/17/21		EBP Question: In first-year undergraduate nursing students, does taking a preparatory course improve student academic success during a pandemic?					
Article Number	Author and Date	Evidence Type	Sample, Sample Size, Setting or Not Applicable	Findings That Help Answer the EBP Question	Observable Measures	Limitations	Evidence Level, Quality
1	Bulfone et al., 2021	Mixed Methods	Total: 2,040; Random: 753; Italian Bacalaureate Nursing Degree program	Failing students' effects nursing shortages and academic costs. 69.4% of students failed academically. Tutorship and repeating of exams effects student attrition. Recommends precourses and strategies to develop self-efficacy in students, starting first year of course.	A prospective follow-up study design was used to measure self-efficacy, socio-demographic variables and self-efficacy in psychomotor skills and motivation.	Only first year variables were considered; not including 2 nd and 3 rd year variables introduced bias, limiting generalization of findings	Level III, High
2	Cox et al., 2021	Mixed Methods	88 faculty from 19/26 schools; 26/30 HRSA-funded SONs,	Importance of identifying factors facilitating and challenging success of MNSs	Descriptive survey research was used to assess quant. And qual. Data (student	Decreased internal validity due to selection bias	Level III, Good

			traditional or accelerated, face-to-face BSN program with MNSs	is essential for preparation of faculty and programs to meet needs of students Developing EBP strategies to use in teaching and advising ensures student success	characteristics, environmental factors, professional integrative characteristics.		
3	Deka, 2021	Qualitative	290 undergraduate and postgraduate students engaged in online learning in India	Factors influencing student engagement: instructor characteristics, student characteristics, course content, course design, learner's environment and technology/ administrative support. Instructor characteristics being the strongest influence.	Survey assessed instructor and student characteristics, course content and design, environment and tech/admin support.	Insufficient sample number to be considered generalized; online survey could be influenced by like-minded groups	Level III, Good
4	Brown et al., 2021	Qualitative	1490 students in an undergraduate nursing programs in Western Canadian province	Nursing students have more strengths compared to other students. Anxiety with test-taking and studying; altered perceptions	Survey collected data analyzing demographics and areas such as anxiety regarding test taking a studying.	Factors related to respondents, execution of survey and tool used. Sample may have been in different cohort.	Level III, High

				of faculty's abilities; students require orientation of expectations			
5	Bulfone et al., 2019	Qualitative	Convenience sample of 1,655 first year BSN students at large university in central Italy	Instrument showed good validity and reliability; could be used to support students with low SE in academic duties	Tool developed to assess academic self-efficacy (SE) in nursing students	Responses influenced by voluntary participation and traceability; not all variables were considered; monocentric study	Level III, High
6	Gray et al., 2019	Qualitative	143 first year PT, OT and ST students at Australian regional university	Homesickness major challenge in transitioning to university life; lack of familiarity with campus, workload, confusion and new skills	Survey assessed factors influencing first 6 weeks at university	Low participation=response bias. Survey was not validated; only one university included	Level III, Good
7	McDonald et al., 2018	Mixed Methods	59 first-year nursing students enrolled in fall 2016; direct-entry four year baccalaureate Canadian nursing program	Learning to prioritize is a key skill to transition survival. Studying and finding new supports in academic environment was a challenge. Program demands (priority and time management).	Survey and focus groups analyzed academic adjustment, personal/emotional adjustment, social and institutional adjustment	Results were not generalized due to inclusion of only one university; demographics limited; recruitment strategies	Level II, High
8	Merritt, 2021	Mixed Methods	60 at-risk nursing students; nursing	Faculty volunteered to support "at-risk" students during	Attendance at workshops; final course grades;	Generalizability limited due to only one school included; some students chose to cease	Level II, High

			<p>program after spring semester grades submitted</p>	<p>pre-semester workshop and series throughout semester. At-risk students were predominantly female with mean age of 30 years. Cohort data included 16 (of 37) first-generation college students. Students reported 96.8% of positive satisfaction with workshops; stated workshops provided critical information and helped relieve stress. Attendance declined when workshops scheduled during time students were not on campus. The more workshops a student attended, the higher their course grades were. Recommendation: faculty workload should allocate time towards</p>	<p>secondary outcomes via questionnaire</p>	<p>participation once confidence developed</p>	
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				student retention activities. Faculty should support “at-risk” students through their barriers to success.			
9	Elkins, 2019	Qualitative	18 participants who failed to complete a BSN program; WV, OH, KY, and VA	Early intervention, family and work, study habits, time management, good support from faculty all play a role in success or failure.	Qualitative survey analyzed why students fail BSN program	N/A	Level III, Good
10	Eltaybani et al., 2021	Qualitative	580 nursing students, 95 nurse educators; undergraduate and graduate program in Egypt	Students experience with online learning was worse than faculty; participants did not receive adequate training; most participants prefer online surveys vs paper	SWOT analysis of online learning; participants experience with online learning; participant demographics	External validity due to restriction to one university; some participants not comfortable with online surveys; tool reliability and validity; low response rate and bias	Level III, Good
11	Kazana & Dolansky, 2021	Organizational Experience (Quality Improvement)	20 online resources within 8 websites	MOOC list is a directory of online courses that faculty and students can take that are similar to academic classes. The AACN website offers QSEN modules and strategies that	Comprehensive review of online resources for learning and teaching QI in health care	N/A	Level V, Good

				nursing faculty may integrate into their curriculum to engage students.			
12	Kubec, 2017	Literature Review	N/A	Student attrition contributes to nursing shortage.. strong positive correlation between successful completion of nursing program and grades from prerequisite courses, especially sciences. Juggling working more than 16 hours a week, home, family and school has a negative impact on student success. Life stressors, self-esteem, and self-efficacy were related to attrition. Minority nursing students have higher attrition rates. Interventions implemented were a comprehensive orientation to program and campus, grouping students into	Cognitive and noncognitive factors associated with attrition	Lack of generalizability in several studies	Level V, High

				mutually supportive learning communities, prompt development of individualized academic plans that were revised each semester, development of a peer tutoring program.			
13	Schub & Woten, 2018	Systematic Review		Nursing students must develop critical thinking skills to support their clinical reasoning and clinical judgement. Accurate methods of assessment are needed to evaluate their critical thinking skills.	Tools to assess critical thinking	N/A	Level IV, Good
14	Harrell & Reglin, 2018	Organizational Experience (Program Evaluation)	Convenience sample of 210 nursing students; Nursing program at 2 nd largest Community College in VA	Impact of advisement on higher education.. providing mentorship for academia. Good advisement is most underestimated characteristic of a successful college experience.	Assessment of satisfaction with advising; student retention	Lacked direct observation; small sample size	Level V, Good

15	Graham et al., 2016	Integrative Review	14 studies; literature from nursing and education	<p>Personal, ongoing contact of students with faculty and staff is essential to long-term student retention. Good faculty advising may be the single most underestimated characteristic of a successful college experience. Success of nursing students is one of the most pressing issues today. Factors include registration, students' grades, students' employment, and students interactions with their professors.</p>	Perceived barriers to clinical education; barriers to success for minority students	Only included students currently enrolled or recently graduated	Level V, Good
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Appendix G

Table 1

Descriptive Statistics of Academic Behavior Confidence (ABC) Scores

Baseline characteristic	Pre Mean (SD)	Sample		
		Interim Mean (SD)	Post Mean (SD)	Overall Mean (SD)
ABC Scores	3.87 (.64)	4.50 (.54)	4.67 (.52)	4.32 (.65)

Note. $N = 8$; $SD = \text{Standard Deviation}$

Figure 1

Pre, Post Implementation, Follow-up Academic Behavior Confidence Scores

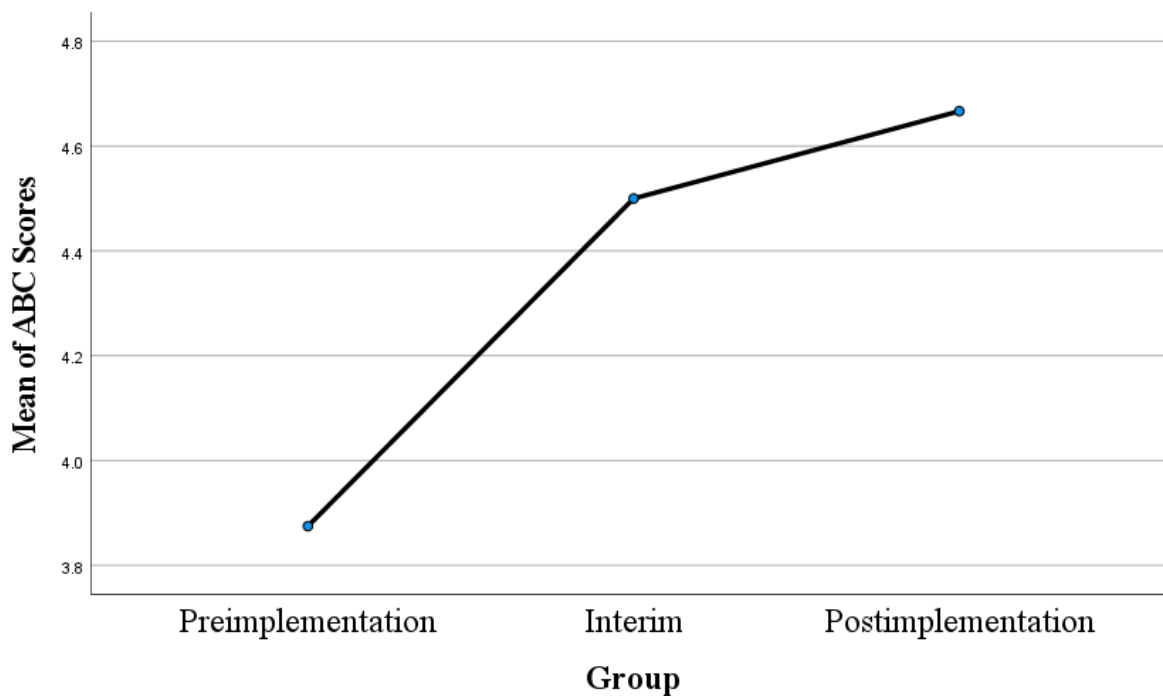


Table 2

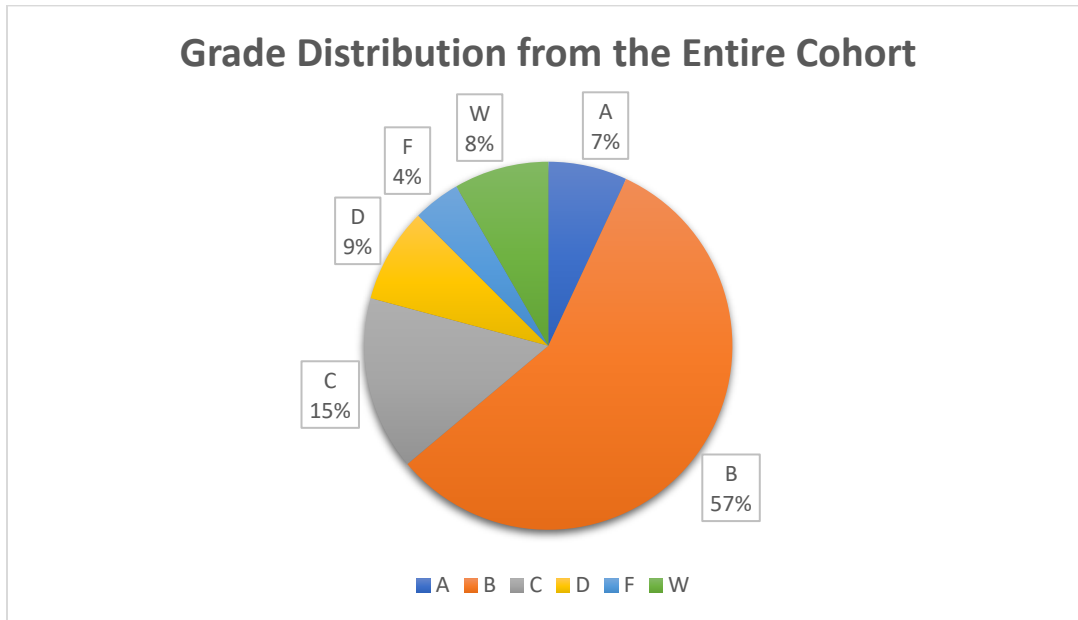
Analysis of Variance of ABC Scores

	$F (df)$	Analysis of Variance		
		p	η^2	Tukey p
ABC Scores	3.92 (2, 19)	.037***	.292	
Preimplementation to Interim				.09
Interim to Postimplementation				.85
Pre to Postimplementation				.048***

Note. $N = 8$, Academic Behavior Confidence Tool – , *** p is statistically significant, $\eta^2 > .14$ is large.

Figure 2

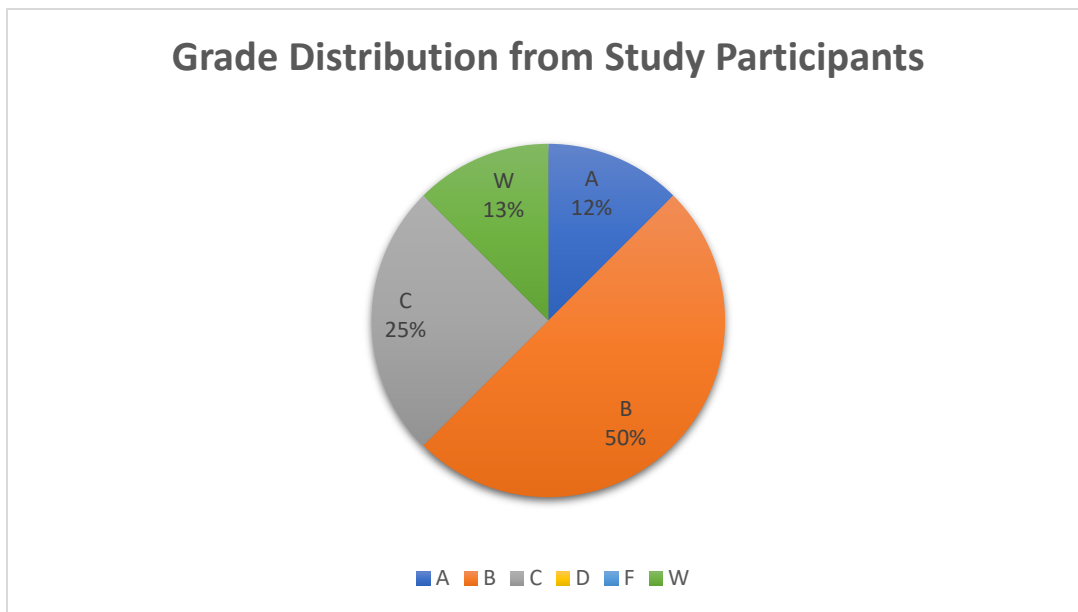
Distribution of Students' Grades from the Fundamentals Nursing Course



Note. N = 72

Figure 3

Distributions of Participants' Grades from the Fundamentals Nursing Course



Note. N = 8

Appendix H**Project Timeline**

Milestone	Description	Estimated Completion Date
GSU IRB Application	GSU IRB approval obtained	August 16, 2022
Project Site IRB Application	Project site IRB approval obtained	August 29, 2022
Email Possible Participants	Email recruitment flyer to students at project site	September 2, 2022, and September 21, 2022
Reminders	Reminder email sent to participants to complete study.	September 28, 2022
Pre-Course Questionnaire, Post-Course Questionnaires, and Course Completion	Participants will complete the first three parts of the study	October 2, 2022
Methodology Paper	Completion of Methodology chapter of DNP project	November 15, 2022
Follow-up Questionnaire and Data Retrieval	Participants complete last component; data extracted from Qualtrics.com	December 7, 2022
Study Raffle Drawing	Dispersion to winners of electronic gift cards	December 9, 2022
Obtain Demographic Data	Data will be retrieved from nurse faculty about student demographics and course grades for the semester	December 9, 2022
Data analysis	Data analysis begins	December 9, 2022