


Perceptions and Motivations of Associate Degree Nursing Students Engaged
in Peer Mentoring and Tutoring Through Supplemental Instruction

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STUDENT PERCEPTIONS OF MENTORING

High attrition rates in associate degree nursing (ADN) programs contribute significantly to a nursing shortage in the United States that is expected to worsen. Nursing students find the learning environment stressful, intimidating, and overwhelming, leading to discouragement in the first year of their nursing education.





ABSTRACT

High attrition rates in associate degree nursing (ADN) programs contribute significantly to a nursing shortage in the United States that is expected to worsen. Nursing students find the learning environment stressful, intimidating, and overwhelming, leading to discouragement in the first year of their nursing education. Research is needed to identify specific retention strategies that can offer ADN students additional support and promote academic success. This study aimed to explore first-semester ADN nursing students' experiences with peer mentoring and peer tutoring provided through supplemental instruction (SI). A basic qualitative study was conducted, and

participants' descriptions of their experiences participating in SI were documented using semi-structured interviews. The findings indicated that students feel SI is a positive experience, but improvement is needed. Exposure to different perspectives through peer mentoring and tutoring improved students' understanding of course material. Stronger peer relationships created consistency for students. Peer mentoring boosted self-confidence among first-semester students, and attendance at SI sessions increased persistence. The findings support the use of peer mentoring to offer academic assistance to first-semester ADN students.



INTRODUCTION

The United States continues to experience a significant shortage of registered nurses (RNs) (Imison, 2017; Massey, 2019; Sharpe, 2018). A contributing factor to this shortage is the high attrition rate among students in associate degree nursing (ADN) programs (Colalillo, 2007; Harris et al., 2014). To reduce attrition rates, some scholars have recommended using peer mentoring and tutoring programs (Abshire et al., 2018; Karsten & DiCiccio-Bloom, 2014). However, there is little research documenting the use of peer tutoring and peer mentoring from the view of ADN students. To address this, the present qualitative study was conducted to assess nursing students' experiences in peer mentoring and peer tutoring as part of a supplemental instruction (SI) program to explore how these academic support strategies are utilized to improve student motivation and persistence.

Nurses provide healthcare in a variety of settings, including hospitals, clinics, skilled nursing facilities, and health insurance companies; the need for nursing care is increasing due to extended life expectancies driving growth in chronic illnesses (Massey, 2019; Sharpe, 2018). In the United States, the need for nurses continues to grow as baby boomers (i.e., individuals born between 1946–1964) reach the age of 70 and begin to experience increased healthcare needs (American Association of Colleges of Nursing [AACN], 2019; Buerhaus et al., 2017; Grant, 2016). While the need for healthcare providers increases, the number of RNs is declining, and these trends contribute to a shortage of nurses (Imison, 2017; Massey, 2019).

The demand for RNs is expected to increase by approximately 500,000 jobs through 2026 (AACN, 2019). However, only 140,000 newly graduated nurses pass the licensing exam and join the nursing workforce every year (American Nursing Association [ANA], n.d.). In addition to changing demographics, the rigidity of nursing education programs also contributes to the nursing shortage (Kubec, 2017). RN programs are designed for students to progress through courses sequentially. If a student is unsuccessful in any semester of a nursing program and withdraws, another student cannot fill the student's original spot so vacancies due to attrition remain empty for the remainder of the program (Kubec, 2017). As a result, class attrition is a contributing factor in the decreasing in nursing graduates (Harris et al., 2014). In recognition of the nursing shortage, community colleges have increased nursing program positions to compensate for attrition and improve graduation rates, but this strategy does not offer a comprehensive solution (Colville et al., 2015). Scholars and practitioners have begun to explore academic support strategies that can address the problem of attrition, and peer mentoring and tutoring provided via SI are examples of such support structures (Schrum, 2015).

Academic performance can be directly influenced by the availability of academic support programs, such as the SI program developed in 1973 at the University of Missouri–Kansas City (Paloyo et al., 2016). SI programs are now offered at many institutions of higher learning around the world. SI programs are free services offered to all students that provide support for academically

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rigorous courses through regularly scheduled, peer-led study sessions intended to contribute to retention rates, student learning outcomes, and student participation in course work (Paloyo et al., 2016; Skoglund et al., 2018). Improved academic success following student participation in SI has been supported in the literature (Channing & Okada, 2019; Guarcello et al., 2017; Skoglund et al., 2018). SI offers students additional assistance and control over their learning, which is in alignment with Knowles's adult learning theory (Curran, 2014).

Mentoring is a process that incorporates a supportive role between a person with more experience and knowledge with a person with less experience and knowledge (Gruber-Page, 2016; Lin et al., 2018). Mentoring also promotes socialization, fosters a sense of belonging to the nursing profession, and increases grades leading to decreased attrition rates (Colalillo, 2007; Kim et al., 2013). Krause-Parello et al. (2013) suggested that peer mentoring should help ADN students develop a strong work ethic, and they also noted that peer mentor and tutor positions provided advanced nursing students with the opportunity to contribute to the future of nursing. In addition to the benefits experienced by mentors, mentees develop behaviors, attitudes, and demonstrate personal growth based on the role-modeling, guidance, and social support offered by the mentor (Zaniewski & Reinholz, 2016). In an educational context, peer mentoring relationships offer students further support that can reduce attrition rates (Fettig & Friesen, 2014).

In nursing, peer mentoring and tutoring can provide support for student nurses from their first semester through to their graduation and transition to licensure (Krause-Parello et al., 2013). Mentoring can also be appropriate for nurses who are developing advanced expertise (Krause-Parello et al., 2013). Peer mentoring and tutoring are common elements of SI, an instructional approach that utilizes peer interaction to encourage learning (Carlsen-Landy et al., 2014). The purpose of SI is to encourage

students to engage with the educational material outside of a classroom setting (Carlsen-Landy et al., 2014). In nursing education, the use of SI resulted in an immediate positive impact on academic success for students who attended SI sessions (Harding, 2012; Roldan-Merino et al., 2019).

The success of mentoring relies on the relationship and the level of interaction that is fostered between mentor and mentee (Alzahrani, 2014). Identifying at-risk students early in the nursing program could lead to decreased attrition rates in ADN programs (Abele et al., 2013). Decreasing attrition rates will ultimately increase the number of students transitioning into the profession of nursing and assist with the nursing shortage.

Scholars and practitioners have begun to explore academic support strategies that can address the problem of attrition, and peer mentoring and tutoring provided via SI are examples of such support structures (Schrum, 2015). In nursing education, the use of SI resulted in an immediate positive impact on academic success for students who attended SI sessions (Harding, 2012; Roldan-Merino et al., 2019). Peer mentoring and tutoring provided through SI typically involves pairing new students with a student further along in the program who has demonstrated success and is more knowledgeable in a specific course or subject area (Channing & Okada, 2019; Guarcello et al., 2017).


This study utilized M. S. Knowles's (1975) theory of adult learning to explore the use of peer mentoring and tutoring provided through SI in the context of ADN programs. The intent was to examine how peer mentoring and peer tutoring experiences were linked to students' academic success and persistence. Mentoring models remain unclear and untested, and as a result, more research is needed to support the use of peer mentoring and tutoring interventions (Peltz & Raymond, 2016). Understanding the students' experiences can assist with the development of specific guidelines for the delivery of SI that includes peer mentoring and tutoring



METHODS

RESEARCH DESIGN

A basic qualitative research design was selected to support the present study. Research focused on the meaning of a phenomenon of interest often use basic qualitative research designs (Merriam, 2009). The present basic qualitative study allowed interpretations of the phenomenon of peer mentoring and tutoring to be constructed based on participants' descriptions of their experiences participating in SI as part of an ADN program.



METHODS: RESEARCH DESIGN

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Participant selection began after the researcher obtained permission from Capella University's Institutional Review Board and the ADN program director to solicit students for their participation in the study. Before obtaining approval to conduct the study, the researcher went to the campus and met with the program administrator to explain the purpose of the study. The researcher and the program administrator discussed the participant selection process, and the program administrator assisted in the recruitment process. The researcher drafted a recruitment email, and the program administrator provided information to students via a face-to-face announcement at

the start of the SI sessions. The recruitment email was sent to the students in the ADN program, and interested students were asked to contact the ADN program administrator. The program administrator shared the contact information of the interested students with the researcher.

The target population was ADN students, and the sample included first-year nursing students that had participated in peer mentoring and tutoring through an SI program. The criteria were based on the research question and reflected the need to document the experiences of first-semester ADN students who had participated in a peer mentoring program offered through SI. Due to the voluntary approach of SI, there were no additional matching of mentors or mentees utilized for this study. The individuals selected to participate in the present study had no previous training or work experience in the nursing field. The sample included students that had participated in SI toward the end or after completion of their first semester in a selected ADN program. The student had to participate in at least one SI session to be included in the present study. Students who did not complete the first semester of the ADN program, regardless of SI session attendance, were excluded. Any students with a past, present, or future student-teacher relationship with the researcher were also excluded from the selection process.

METHODS: RESEARCH DESIGN

The data were collected through open-ended, semi-structured interviews. The purpose of the interviews was to collect descriptive data that would allow for the development of rich interpretations of the participants' experiences and to allow meaning to be derived from those experiences (Merriam, 2009). Open-ended questions were used to facilitate the emergence of themes during analysis (Yates & Leggett, 2016). An expert panel reviewed the guiding interview questions prior to the study. This review process led to the refinement of the interview guide, and the following 12 questions were used in the initial interviews:

1. What were your expectations when entering the peer tutoring situation?
2. What were your experiences of participating in a peer tutoring program?
3. What kind of relationship do you experience with your peer tutor?
4. What techniques, ideas, or support has the peer mentor (SI person) provided to you that has attributed to your success in fundamentals?
5. So far, how have you been doing?
6. What effects do you feel that participating in a peer mentoring program has had toward your outcomes in your first (fundamentals) semester?
7. What role does the peer mentoring play in motivating you toward academic persistence?
8. You mentioned that your peer mentor helped you with a study guide, is there anything else that your peer mentor helps you with?
9. What advice would you give future fundamentals students on how to use the peer mentoring/tutoring program to improve their course outcomes?
10. What would you like to see in a peer mentoring/peer tutoring program in the future?
11. Tell me 3 ways we could modify peer tutoring for future students?
12. Additions.

The data were digitally recorded to allow the researcher access to the interview for the data analysis process. Digital recordings were then utilized to create written transcripts of the interviews. The written transcripts were then manually analyzed by the researcher. The data analysis process for the present basic qualitative study followed 13 steps identified by Percy et al. (2015). A thematic analysis process was used to analyze the data. This process included assigning codes to the data and searching for patterns and themes within the participants' responses.



METHODS

ASSUMPTIONS

The present study relied on several assumptions. From a methodological perspective, the main ontological assumption was that reality is subjective, and the experiences of one individual may not be representative of another individual.



METHODS: ASSUMPTIONS

The present study relied on several assumptions. From a methodological perspective, the main ontological assumption was that reality is subjective, and the experiences of one individual may not be representative of another individual. Additionally, it was assumed that meaning is socially constructed, and interactions between individuals influence the perceptions, attitudes, and understandings of others. Thus, it was assumed that it was impossible for the researcher to be wholly unbiased though measures were taken to limit the potential for bias.

Theoretical assumptions that supported the research were associated with the selection of Knowles's (1975) theory of adult learning. Knowles's theory assumes that adults learn differently than children. Knowles (1980) summarized 5 assumptions between the educational model of education and the individual. The 5 assumptions are that (1) adults will move from dependency toward self-directed learning; (2) adult learners rely on experiences as a resource for learning; (3) adult learners are goal-oriented and rely on what they need to know as they become ready to learn; (4) adults have an orientation to learning that is task-centered, encouraging a problem-centered focus on learning; (5) adult learners have internal motivators to learn, developing self-fulfillment.

Knowles (1980) believed that adult learners' educational needs are driven by independence and self-directedness as they mature. Curran (2014) noted the effectiveness of Knowles' adult learning theory was due to self-directed learning and the pre-established beliefs and learning experiences that shape an adult learner's motivations for learning. The participants represent mature adult learners. Maturity allows a learner to use past experiences to shape the learning process. The learning environment for adult learners includes drawing on their own experiences and taking personal responsibility for their educational advancement (Knowles, 1975).

Two final assumptions were specific to the use of peer mentoring and peer tutoring as academic support strategies among ADN students participating in SI. The first assumption was that improvements in student motivations and persistence would result from structured peer interaction, and these improvements would lead to a decrease in attrition from ADN programs. The second topical assumption was that decreases in attrition would help to significantly address the nursing shortage.

RESULTS

Percy et al. (2015) identified 13 steps that guided this basic qualitative study to determine how ADN students identified and described the role of peer mentoring following peer-led SI session experiences. Six themes emerged following the analysis of data obtained through semi-structured interviews with 9 participants.



The themes that emerged from the data analysis aligned with individual research questions while at the same time contributing to an overall assessment of the impact of peer mentoring and tutoring provided through SI.

Table 1 presents the study's research questions and the themes that most closely aligned to each question.

Percy et al. (2015) identified 13 steps that guided this basic qualitative study to determine how ADN students identified and described the role of peer mentoring following peer-led SI session experiences. Six themes emerged following the analysis of data obtained through semi-structured interviews with 9 participants. The analysis indicated that participants believed SI sessions offered a positive experience. Further, the participants felt that the content review provided through SI sessions improved academic success. As part of their feedback, participants offered suggestions to improve future SI sessions. The different perspectives offered by peer leaders in the SI sessions assisted first-semester students in understanding challenging information.

Interview data collected as part of this study were analyzed using an inductive process (Percy et al., 2015), and the findings were categorized

into 6 themes that answered the original 3 research questions. The themes that emerged from the data analysis aligned with individual research questions while at the same time contributing to an overall assessment of the impact of peer mentoring and tutoring provided through SI. Table 1 presents the study's research questions and the themes that most closely aligned to each question. Theme 1 indicated that participants valued the SI sessions because they contributed to academic success. Theme 2 noted that despite the value of SI, improvements were still needed. Theme 3 identified the importance of different perspectives offered through peer mentoring and tutoring. Theme 4 suggested that strong peer connections helped to create consistency for students. Theme 5 revealed that peer mentoring improved students' self-confidence. Finally, theme 6 indicated that SI did increase persistence.

TABLE 1

Alignment Between the Research Questions and Themes	
Research Questions	Themes
1: How do ADN students describe their experiences participating in SI?	Theme 1: SI is a positive experience. Theme 2: Improvements are needed.
2: What were the peer mentoring experiences of ADN students after participating in a peer tutoring program provided through SI?	Theme 3: Different perspectives improve understanding. Theme 4: Stronger peer connections create consistency.
3: How do ADN students describe the role of peer mentoring in light of their motivation for academic success and persistence?	Theme 5: Peer mentoring boosts self-confidence and motivation. Theme 6: SI Sessions increased persistence.

Abbreviations: ADN = associate degree in nursing; SI = supplemental instruction.

RESULTS CONT.

The core element of theme 1 was that participants felt additional instructional content provided through SI resulted in a positive educational experience. Participant 9 expressed gratitude about learning of the opportunity to participate in S: "Coming in, I didn't know they had SI, but then we were told we had it, and it was available to us, and I am glad SI was available." Participant 5's responses provided evidence of the value of SI based on her limited availability: "I made time for it [SI], and I had a little downtime between class and SI." She also highlighted the positive nature of her experience, further stating "It was a pretty good overall experience. I would like to have it as we are continuing."

The first theme was most closely aligned with research question 1: How do students pursuing an associate nursing degree describe their experiences participating in SI? In theme 1, SI was described as a positive experience that improved academic performance through the content review processes. Most of the participants felt that the content review, along with the application of the content provided by the peer SI leader, improved student success in course fundamentals. Participants felt the use of the time scheduled for SI sessions to review important content offered a positive experience leading to improved academic performance. Participants also felt that preparing for scheduled SI sessions assisted with accountability as the peer SI leader would review important course material.

The second theme that emerged from the data was that despite positive attitudes toward the SI program, students noted that improvements were needed to make the SI program less of a barrier to success. Despite the recognized need for improvement, the participants expressed positive attitudes toward the SI program. Participant 7 stated "The nursing program is hard... anyone should go to SI." Participants found value in the review of content that was offered through attendance in SI sessions. Participant 1 stated that "content was a bonus," and Participant 6 agreed by stating "I didn't expect the content, but I liked it." Some participants felt that the

first semester of the ADN program was overwhelming, and as a result, some students didn't realize the importance of SI until it was too late. Participant 3 explained "You never really know what the questions ask you, it's hard. This is hindsight though; you are so overwhelmed in the first semester you had no idea you needed SI until later."

The third theme was that peer mentoring and tutoring provided students with different perspectives and helped students understand difficult material in the first semester of the ADN program. This theme was derived from participants' beliefs that SI provided insight into what to expect as they progressed in the ADN program. Participant 9 stated that SI leaders were able to give students guidance to "look at the material in a different way," and believed that the alternate perspective contributed to academic success: "I was able to get a better understating of the information by looking at it differently." Participant 9 also offered an example of how different perspectives were shared, stating "I think that giving an understanding about how to approach a class and how they approached this class...giving different things to look at, such as different web sites, different textbooks." Because SI leaders were able to lead discussions, students were often exposed to different ways of approaching problems. Additionally, Participant 8 noted that "practice problems provided a different perspective on the material." Participants believed that the insights shared by the SI leaders were helpful in seeing the material from a different perspective.

The fourth theme was that participants felt stronger connections with peer leaders than with instructors and appreciated the consistency of the SI leaders. Peer SI leaders motivated students to stay active and not fall behind. Participant 5 stated "They motivated me to not be lazy and to review before the exam." Some participants felt that the peer SI leaders were nice because, in addition to offering guidance and direction, they also offered moral support. Participant 7

RESULTS

said "The SI leader would say 'if you can understand this, you'll be able to get it.'" Most participants felt SI was a good overall experience because of the peer SI leaders. Participants 4, 5, 6, and 7 all characterized the SI leaders as "nice." Participant 5 added that "SI was pretty good." Participant 3 stated that "the peer mentor was great," and Participant 4 described the peer leaders as "really helpful." These statements made by the participants demonstrated that first-semester students valued the mentoring relationships developed during the SI sessions.

The fifth theme was that SI sessions increased student motivation by using peer mentoring to boost students' self-confidence. Theme 5 was derived from participants' feelings that the SI sessions motivated them to keep up with the material. Participants cited higher levels of self-confidence when they achieved success in their exams. Most participants felt they had better success after collaborating with their peer SI leaders. Some participants felt that their peer SI leader knew exactly what to say to keep them on the track to success. Pep talks and words of encouragement provided by peer SI leaders offered participants motivation and further boosted the participants' self-confidence.

The final theme identified that SI sessions supported student success by increasing persistence

during the first semester of the ADN program. This theme was developed based on the participants' belief that their success was supported by peer mentors when attending SI sessions. Multiple participants found the test-taking strategies and support offered by SI leaders very helpful. Participants expressed further support for SI sessions when asked to give advice to future nursing students. Participant 2 suggested "Take advantage of SI. Go and actually fill out the papers before the SI leaders give you the answers to see what you know." Participant 1 cited the importance of the knowledge gained by attending SI sessions stating "go and use those people as a resource. They have been through it, ask them lots of questions, they are really good about answering questions." Participant 4 added "the paperwork we got through SI really helped." Participant 5 recommended "going to all of the SI sessions and being prepared when you get there." Participant 8 reiterated the importance of "reviewing the material before going to SI, so you get more out of it." Participant 6 advised, "if you don't feel comfortable with material, you should go to SI." Participant 7 said "the nursing program is hard...anyone should go to SI." Participant 9 concluded with advice to "utilize SI and ask questions when you are unsure about a topic." The participants' responses demonstrated that they felt strongly that attending SI would help future students achieve academic success.

DISCUSSION + CONCLUSION

Overall the results of this study indicate peer mentoring and tutoring provided through SI positively influenced students' experiences during the first semester of the ADN program. Some suggestions have been highlighted to improve the program and help students benefit from peer-based academic support. Students' perspectives can be broadened through the utilization of peer mentors because of the different perspectives these mentors share with their mentees. Mentoring experiences positively impact students' self-confidence and motivation, and participants' experiences suggest that student outcomes can be improved through peer mentoring in ADN programs.





DISCUSSION + CONCLUSION

Participants felt that participating in SI sessions was a positive experience that assisted with content review and improved academic performance. Mentors offered a different perspective of course material, which helped first-semester students understand the difficult course material. Participants valued the SI sessions enough to provide suggestions for future improvement.

Participants felt that participating in SI sessions was a positive experience that assisted with content review and improved academic performance. Mentors offered a different perspective of course material, which helped first-semester students understand the difficult course material. Participants valued the SI sessions enough to provide suggestions for future improvement. Consistency among peer SI leaders was important as consistency enabled students and peer mentors to form bonds and connections. The connections with peer SI leaders were stronger than the bonds between students and professors in the ADN program. Participants also reported that peer mentoring boosted self-confidence and improved students' motivation. The self-confidence encouraged by peer mentoring positively influenced student outcomes.

Scholars highlighted the need to focus on persistence in nursing education to understand attrition rates in nursing education (Fagan & Coffey, 2019). Socialization into the profession of nursing begins with nursing education, and persistence in nursing education can be nurtured

through mentoring (Fagan & Coffey, 2019). Socialization in education is supported by the adult learning theory (Knowles, 1975). Participants in this study valued the peer mentoring support they received during SI sessions. Adult learners need a learner-centered approach to education rather than the teacher-centered approach used to instruct children (Curran, 2014). Peer mentoring supports both the learner-centered approach, and the socialization adult students need to succeed. This study highlighted the importance the participants placed on the shared experiences of the peer SI leaders who offered mentoring support. The participants also valued the relationships that were fostered with peer mentors. Socialization into nursing education was provided via peer mentoring and was supported by findings.

Everett (2020) suggested that faculty should focus on incorporating retention strategies to decrease attrition rates in nursing education in the first-semester classes (Everett, 2020). Focus was placed on the first semester of an ADN program, where participants reported positive attitudes toward the SI program. The



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participants noted that improvements are needed to strengthen the SI program in the future. One of the main improvements suggested was revised scheduling to encourage attendance. Participants also recommended making the consistency of SI leaders a priority. Participants felt peer mentors helped with motivation and boosted first-semester students' self-confidence leading to overall persistence in the ADN program. The present study supported using peer mentors and tutors to assist nursing educators in ADN programs.


The primary limitation of this study was the narrow investigative scope. The sample of students who participated in peer mentoring and tutoring was limited to 1 SI program at a single college. The average class of first-semester nursing students at the college was 80–85 students per semester. From this average number, the number of students engaging in peer mentoring and tutoring is limited and varies each week peer tutoring is offered. No more than 15 students attended peer tutoring sessions for any week offered in the first semester of the nursing program. Thus, the sample frame for the present study limited the ability to survey a wide range of ADN students. This limitation was not expected to adversely affect the study's findings as qualitative studies rely less on large sample sizes and more on the ability to collect detailed descriptions of participants' experiences, beliefs, and attitudes (Griffith, 2013).

A methodological limitation was related to the limited availability of the participants to meet with the researcher. The students who participated in the peer mentoring and tutoring through SI had limited availability due to their busy schedules. ADN programs are very rigorous,

with many obligations (Karsten & DiCiccio-Bloom, 2014; McKellar & Kempster, 2017). Furthermore, nontraditional students often face additional responsibilities, including work, family, and personal commitments that make scheduling interviews difficult (Olsen, 2017). Flexibility on the part of the researcher was necessary to ensure the interviews took place at times when the participants did not feel rushed or preoccupied. Thus, the researcher made every possible effort to respect participants' preexisting time commitments.

The nursing shortage continues to be a global issue, and high nursing program attrition rates are promoting the nursing shortage (Lisa, 2018; Peterson-Graziose et al., 2013; Smith et al., 2016). Academic support strategies, including SI, peer mentoring, and peer tutoring, need to be implemented to decrease attrition rates in ADN programs. The use of peer mentoring to offer academic support is well supported in the education literature, but little research has focused on the use of peer mentoring in ADN programs. Additional support is needed for nursing students to increase persistence, boost success, and decrease attrition rates. Retaining and graduating more nurses will help to decrease future nursing shortages.

This study answered several questions. Students pursuing an ADN described their experiences participating in SI as a positive experience. The participants further made the connection that attending SI sessions improved their academic performance. The participants appreciated the content review led by their peer SI leaders and valued the SI experience enough to make suggestions for improvement. These suggestions pertained to scheduling to improve attendance



Developmental Education Success:

Exploring Student Success Strategies in Developmental Education at the Community College Level

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and consistency in SI leaders to improve upon the peer mentoring relationships that are established during the semester.

The study's findings indicated that peer mentoring and tutoring provided students with different perspectives and helped them understand difficult material during the first semester of the ADN program. The students placed value on shared experiences that the peer SI leaders were able to provide. The first-semester students also felt a stronger connection with peer SI leaders than with instructors. The consistency of peer SI leaders provided additional support that increased motivation and persistence among first-semester ADN students.

The final research question focused on how nursing students pursuing an ADN described the role of peer mentoring in light of their motivation for academic success and persistence. The participants felt that peer mentoring increased motivation by increasing the students' self-confidence. The content review, tips from the peer mentors, and experiences shared by

the peer mentors led to increased academic success. That success encouraged students' self-confidence and promoted persistence within the program.

Providing first-semester ADN students with an opportunity to share their experiences with SI, peer mentoring, and peer tutoring provided a better understanding of what support ADN students feel they need. The present study supported the use of peer mentoring to offer academic support to first-semester ADN students. Additional support is needed throughout nursing education. This study focused on ADN programs, but the challenges associated with attrition are similar across the field of nursing education because of the rigor of nursing programs. The data presented in this study can assist nursing educators in deciding whether to utilize peer mentoring in ADN and other nursing programs. Decreased attrition rates will result in the graduation of larger numbers of nurses, improving the academic experience for these students, and decreasing the nursing shortage.





REFERENCES



Developmental Education Success:

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1. Abele, C., Penprase, B., & Ternes, R. (2013). A closer look at academic probation and attrition: What courses are predictive of nursing student success? *Nurse Education Today*, 33, 258–261. doi:10.1016/j.nedt.2011.11.017
2. Abshire, D. A., Graves, J. M., Roberts, M. L., Katz, J., Barbosa–Leiker, C., & Corbett, C. F. (2018). Student support in accelerated nursing programs: Gender–based perspectives and impact on academic outcomes. *Nursing Outlook*, 66(1), 84–93. doi:10.1016/j.outlook.2017.08.010
3. American Association of Colleges of Nursing. (2019). Fact sheet: *Nursing shortage*. Retrieved from <https://www.aacnnursing.org/News-Information/Fact-Sheets/Nursing-Shortage>
4. American Nurses Association. (n.d.). *Nurse hiring outlook and industry trends: 10 questions for ANA's Health Care Economist Peter McMenamin, PhD*. Retrieved from https://www.nursingworld.org/-4afb8f/globalassets/practiceandpolicy/health-and-safety/rnjobmkt_peterminterview_final_030713.pdf
5. Alzahrani, H. A. (2014). Mentorship teaching in clinical teaching of nursing. *Middle East Journal of Nursing*, 8(4), 15–18. doi:10.5742/MEJN.2014.92588
6. Buerhaus, P., Skinner, L., Auerbach, D., & Staiger, D. (2017). Four challenges facing the nursing workforce in the United States. *Journal of Nursing Regulation*, 8(2), 40–46. doi:10.1016/S2155-8256(17)30097-2
7. Butina, M., Campbell, S., & Miller, W. (2015). Conducting qualitative research introduction. *American Society for Clinical Laboratory Science*, 28, 186–189. doi:10.29074/ascls.28.3.186
8. Carlsen–Landy, B., Falley, B., Wheeler, A., & Edwards, D. (2014). Adaptations of supplemental instruction: Our course assistants wear many hats. *Supplemental Instruction Journal*, 1(1), 7–21. Retrieved from <https://info.umkc.edu/si/journal/>
9. Channing, J., & Okada, N. C. (2019). Supplemental instruction and embedded tutoring program assessment: Problems and opportunities. *Community College Journal of Research and Practice*, 44, 241–247. doi:10.1080/10668926.2019.1575777
10. Colalillo, G. (2007). Mentoring as a retention strategy in a diverse, multicultural, urban associate degree nursing program. *Teaching and Learning in Nursing*, 2(2), 28–33. doi:10.1016/j.tein.2007.01.005
11. Colville, J., Cottom, S., Robinette, T., Wald, H., & Walters, T. (2015). A community college model to support nursing workforce diversity. *Journal of Nursing Education*, 54(2), 65–71. doi:10.3928/01484834-20150119-12



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12. Curran, M. K. (2014). Examination of the teaching styles of nursing professional development specialists, part I: Best practices in adult learning theory, curriculum development, and knowledge transfer. *The Journal of Continuing Education in Nursing, 45*(5), 233–240. doi:10.3928/00220124-20140417-04
13. Everett, M. C. (2020). Sharing the responsibility for nursing student retention. *Teaching and Learning in Nursing, 15*(2), 121–122. doi:10.1016/j.teln.2019.12.009
14. Fagan, J. M., & Coffey, J. S. (2019). Despite challenges: *Nursing student persistence. Journal of Nursing Education, 58*(7), 427–430.
15. Fettig, K., & Friesen, P. (2014). Socialization of non-traditional nursing students. *Creative Nursing, 20*(2), 95–105. Retrieved from <https://www.springerpub.com/creative-nursing.html>
16. Grant, R. (2016). The US is running out of nurses. *The Atlantic*. Retrieved from <https://www.theatlantic.com/health/archive/2016/02/nursing-short-age1459741>
17. Griffith, D. A. (2013). Establishing qualitative geographic sample size in the presence of spatial autocorrelation. *Annals of The Association of American Geographers, 103*, 1107–1122. doi:10.1080/00045608.2013.776884
18. Gruber-Page, M. (2016). The value of mentoring in nursing: An honor and a gift. *Oncology Nursing Forum, 43*, 420–422. doi:10.1188/16.ONF.420-422
19. Guarcello, M. A., Levine, R. A., Beemer, J., Frazee, J. P., Laumakis, M. A., & Schellenburg, S. A. (2017). Balancing student success: Assessing supplemental instruction through coarsened exact matching. *Technology, Knowledge and Learning, 22*, 335–352. doi:10.1007/s10758-017-9317-0
20. Harding, M. (2012). Efficacy of supplemental instruction to enhance student success. *Teaching and Learning in Teaching, 2012*(7), 27–31. doi:10.1016/j.teln.2011.07.002
21. Harris, R. C., Rosenberg, L., & Grace O'Rourke, M. E. (2014). Addressing the challenges of nursing student attrition. *Journal of Nursing Education, 53*(1), 31–37. doi:10.3928/01484834-20131218-03
22. Imison, C. (2017). Nursing shortages put future of NHS at risk. *Nursing Standard 31*(37), Article 29. doi:10.7748/ns.31.37.29.s25
23. Karsten, K., & DiCiccio-Bloom, B. (2014). Acknowledging the academic rigor of associate degree nursing education: A grounded theory study of overcoming failure. *Teaching and Learning in Nursing, 9*, 153–163. doi:10.1016/j.teln.2014
24. Kim, S. C., Oliveri, D., Riingen, M., Taylor, B., & Rankin, L. (2013). Randomized controlled trial of graduate-to-undergraduate student mentoring program. *Journal of Professional Nursing, 29*(6), e43–e49. doi:10.1016/j.prof-nurs.2013.04.003



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25. Knowles, M. S. (1975). Adult education: New dimensions. *Educational Leadership*, 33, 85-88. Retrieved from <http://www.ascd.org/publications/educational-leadership.aspx>
26. Knowles, M. S. (1980). My farewell address: Andragogy, no panacea, no ideology. *Training & Development Journal*, 34(8), 48-50. Retrieved from <https://www.questia.com/library/p411170/training-development-journal>
27. Krause-Parello, C., Sarcone, A., Samms, K., & Boyd, Z. N. (2013). Developing a center for nursing research: An influence on nursing education and research through mentorship. *Nurse Education in Practice*, 13(2), 106-112. doi:10.1016/j.nepr.2012.08.004
28. Kubec, C. (2017). Reducing nursing student attrition: The search for effective strategies. *The Community College Enterprise*, 23(1), 60-68. Retrieved from <https://www.schoolcraft.edu/cce>
29. Lin, J., Chew, Y. R., Toh, Y. P., & Radha, L. K. (2018). Mentoring in nursing. *Nurse Educator*, 43, E1-E5. doi:10.1097/NNE.0000000000000389
30. Lisa, S. (2018). The stories of nursing student repeaters: A narrative inquiry study. *Nurse Education in Practice*, 28, 190-114. doi:10.1016/j.nepr.2017.10.015
31. Massey, K. (2019). An acute shortage: As nursing jobs go unfilled, crunch is getting worse. *Arkansas Business*, 36(13), 1-11. Retrieved from <https://www.arkansasbusiness.com/>
32. McKellar, L., & Kempster, C. (2017). We're all in this together: Midwifery student peer mentoring. *Nurse Education in Practice*, 24, 112-117. doi:10.1016/j.nepr.2015.08.014
33. Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.
34. Olsen, J. M. (2017). Integrative review of admission factors related to associate degree nursing program success. *Journal of Nursing Education*, 56(2), 85-93. doi:10.3928/01484834-20170123-05
35. Paloyo, A., Rogan, S., & Siminski, P. (2016). The effect of supplemental instruction on academic performance: An encouragement design experiment. *Economics of Education Review*, 2016(55), 57-69. doi:10.1016/j.econdu-rev.2016.08.005
36. Peltz, C. M., & Raymond, D. M. (2016). Effects of associate degree nursing students' characteristics on perceptions and experiences of mentoring. *Journal of Nursing Education*, 55, 258-265. doi:10.3928/01484834-20160414-04



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Exploring Student Success Strategies in Developmental Education at the Community College Level

37. Percy, W. H., Kostere, K., & Kostere, S. (2015). Generic qualitative research in psychology. *The Qualitative Report*, 20, 76–85. Retrieved from <https://nsuworks.nova.edu/tqr/>
38. Peterson-Graziose, V., Bryer, J., & Nikolaidou, M. (2013). Self-esteem and self-efficacy as predictors of attrition in associate degree nursing students. *Journal of Nursing Education*, 52, 351–354. doi:10.3928/01484834-20130520-01
39. Roldan-Merino, J., Miguel-Ruiz, D., Roca-Capara, N., & Rodrigo-Pedrosa, O. (2019). Personal tutoring in nursing studies: A supportive relationship experience aimed at integrating, curricular theory and professional practice. *Nurse Education in Practice*, 37, 81–18. doi:10.1016/j.nepr.2019.05.005
40. Sharpe, J. (2018, December 3). Nursing shortage continues across nation. Lehigh Valley Business. Retrieved from <https://www.lvb.com/nursing-shortage-continues-across-nation/>
41. Schrum, R. A. (2015). Nursing student retention in an associate degree nursing program utilizing a retention specialist. *Teaching and Learning in Nursing*, 10(2), 80–87. doi:10.1016/j.teln.2014.09.002
42. Skoglund, K., Wall, T. J., & Kiene, D. (2018). Impact of supplemental instruction participation on college freshman retention. *The Learning Assistance Review*, 23(1), 115–135. Retrieved from <https://nclca.wildapricot.org/tlar>
43. Smith, L., Engelke, M., & Swanson, M. (2016). Student retention in associate degree nursing programs in North Carolina. *Journal of Applied Research in the Community College*, 23(1), 41–56. Retrieved from <https://www.ingenta-connect.com/content/montezuma/jarcc>
44. Yates, J., & Leggett, T. (2016). Qualitative research: An introduction. *Radiologic Technology*, 88(2), 225–231. Retrieved from <http://www.radiologictechnology.org/>
45. Zaniwski, A. M., & Reinholz, D. (2016). Increasing STEM success: A near-peer mentoring program in the physical sciences. *International Journal of STEM Education*, 3(1), 1–12. doi:10.1186/s40594-016-0043-2