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A DESCRIPTIVE STUDY ON THE PERCEIVED BARRIERS TO ACADEMIC
PROGRESSION FROM LPN TO RN

By

REBEKAH BLAINE SNYDER

Submitted to the Faculty of the Graduate College of
Arkansas Tech University
in partial fulfillment of the requirements
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ABSTRACT

A DESCRIPTIVE STUDY ON THE PERCEIVED BARRIERS TO ACADEMIC PROGRESSION FROM LPN TO RN

The significance of seamless academic progression has been emphasized in the nursing profession for more than a decade. A significant amount of research has been conducted on the transition from registered nurse (RN) to a Bachelor of Science in Nursing (BSN) prepared nurse in order to identify potential barriers to progression: yet a significant literature gap exists for the transition from licensed practical nurse (LPN) to RN. The purpose of this quantitative descriptive study was to identify what perceived barriers practical nursing students and recent practical nursing graduates identify as potentially hindering academic progression to a registered nursing program. Data was collected anonymously using a researcher-developed survey distributed to current students and recent graduates of a practical nursing program. Twenty-nine participants completed the survey. Results indicate that, while many potential barriers to academic progression that exist for RNs transitioning to BSN may also exist for an LPN transitioning to RN, the experience necessitates further research.

Keywords: nursing academic progression, barriers, LPN

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I. Introduction

Nursing as a profession has emphasized academic progression for decades to assist with meeting the healthcare system's demands for more nurses in the workforce. Academic progression allows nurses to enter the workforce with different levels of training, all while customizing their education pathways to meet the needs of their life and career allowing for upward social mobility and career growth. While all nurses are encouraged to continue their education throughout their lifetime, some nurses enter the workforce and never further their education beyond their initial educational training. The Institute of Medicine (IOM) (2011) set the goal of 80% of the nursing workforce being Bachelor of Science in Nursing (BSN) prepared by 2020. While the percentage of BSN-prepared nurses increased from 50% in 2011 to 59% in 2019, there remains a substantial gap to the goal of 80% (National Academies of Sciences, Engineering, and Medicine, 2021). This continues to be a priority goal for nursing education, as improved outcomes for clients are associated with an increased proportion of BSN-prepared nurses. To strengthen the nursing workforce and improve client outcomes, it is imperative "to encourage nurses to pursue the next level of education and certification available to them and to improve access to these educational opportunities" (National Academies of Sciences, Engineering, and Medicine, 2021, p. 227).

There are two significant progressions that might occur in an undergraduate nursing career: the transition from a licensed practical nurse (LPN) to a registered nurse (RN) and completing BSN training for an RN. Both transitions require training at an institute of higher education (IHE) and have many components that could prevent a student from progressing their education.

Statement of the Problem

Many barriers that might negatively affect nurses wishing to progress from RN to BSN have been identified through research, yet there is a significant gap in research identifying potential barriers to progression from LPN to RN. However, RN-to-BSN graduates increased 236% from 2011 to 2019 (National Academies of Sciences, Engineering, and Medicine, 2021), yet Smiley et al. (2018) found that more than 75% of LPNs have not pursued a higher level of nursing education. The purpose of this research is to identify what practical nursing students and recent practical nursing graduates perceive as barriers to academic progression to a registered nursing program.

Need for the Study

In 2011, the IOM (2011) endorsed nursing education transformation and promoted higher levels of nursing education through seamless academic progression to obtain a BSN degree. *The Future of Nursing 2020-2030* (National Academies of Sciences, Engineering, and Medicine, 2021) postulates, "Nurses already in the workforce face barriers to pursuing a BSN, including time, money, work-life balance, and a perception that additional post-license education is not worth the effort" (p. 200). The National Academies of Sciences, Engineering, and Medicine (NASEM) (2021) report calls for inclusivity in nursing, including "addressing barriers that may prevent students from achieving their potential" (p. 223). The United States Department of Education (USDE) (2021) encourages postsecondary institutions to utilize "stackable credentials" (p. 1) by offering milestones throughout an educational pathway and providing multiple entry points into a career. The academic progression used in nursing meets the USDE's stacking credentials criteria. Utilizing academic progression in nursing supports three

United States (U. S.) federal laws: the Higher Education Act, the Workforce Innovation and Opportunity Act (WIOA), and the Carl D. Perkins Career and Technical Education for the 21st Century Act. Nursing educators must identify both perceived and actual barriers for students and work to minimize or remove those barriers to make academic progression in nursing as seamless as possible.

Assumptions

In this descriptive study, it may be assumed that the participants are enrolled in or have recently graduated from the last three cohorts of a practical nursing program, using the email addresses provided to that program. It is assumed that the participants can read and comprehend English, even if it is not the participant's primary language, as it is required for participation in the practical nursing program in which they are or were enrolled. Finally, it is also assumed that all participants who complete the survey will answer all survey questions honestly.

Research Question

What do practical nursing students and recent practical nursing graduates perceive as barriers to academic progression to a registered nursing program?

Limitations

This research is a relatively small study at a single college campus in rural Arkansas. The barriers to academic progression identified by the students and nurses asked to participate in this research may not correlate with those in other locations or geographical areas. The small sample size limits the generalizability of results. The research could be easily duplicated with larger populations, in other locales, or on different campuses. The use of convenience sampling may result in a sample that does not

accurately represent the population. The COVID-19 pandemic affected the nursing education of all six cohorts of students who were invited to participate in this survey. The survey included a question clarifying barriers related to the COVID-19 pandemic, but the effect of the pandemic on the initial nursing program experience cannot be excluded.

Definitions

An **RN** is a nurse that has graduated from a state-approved nursing education program with a minimum of an Associate's Degree in Nursing or a Diploma in Nursing and has successfully sat for the NCLEX-RN Examination for licensure. RNs are trained to provide direct patient care in a range of care settings. A **BSN** is an RN who has completed a Bachelor of Science in Nursing program, which prepares the RN to utilize the full scope of nursing practice (National Academies of Sciences, Engineering, and Medicine, 2021).

An **LPN**, also called a licensed vocational nurse (LVN) in California and Texas, is trained in a practical nursing (PN) program at a vocational, technical, or community college, then can sit for the NCLEX-PN Examination to become licensed. Once licensed, the LPN can provide basic patient care, support the RN in providing care in an interprofessional team, or assist medical providers in a primary care setting.

For this study, a **practical nursing student** is a student that is currently enrolled in the practical nursing program. A **recent graduate** is a student who has completed the practical nursing program in the last three semesters. Recent graduates may or may not be licensed at the time of the survey and therefore will not be referred to as LPNs.

Nursing academic progression is obtaining formal educational training in nursing above the entry-level of training. Academic progression can include formal education to

advance licensure, obtaining nursing certifications, or other forms of training as a form of "career growth and development" (American Association of Colleges of Nursing, 2012, para. 2). The term academic progression will be used broadly for this research unless the specific pathway, such as an LPN progressing to RN, is defined. **Barriers** to academic progression are any hindrances to the career advancement desired through academic progression. These hindrances could be related to the learning institution, the nurse, the nurse's employer, or any number of other factors that inhibit the nurse from participating or being successful in the desired educational advancement.

Summary

Identifying barriers may increase interest in academic progression, decrease bridge program attrition rates, and streamline academic progression to promote student success. Academic progression beyond licensed practical nursing could increase job opportunities as well as wages for this population of nurses. Identifying the perceived barriers not only helps current nursing students, but may aid future nursing students in their educational pursuits. Academic progression increases the likelihood of upward social mobility for nurses, which, in turn, can impact many generations to follow.

II. Literature Review

The purpose of this research is to identify what PN students and recent LPN graduates have previously identified as barriers or perceived barriers to academic progression to a registered nursing program. Academic progression has been a concerted effort in nursing education for over a decade but has been discussed in the profession for many years. The National League for Nursing (NLN) (2011) described the historical meaning of academic progression as the existence of articulation models in institutes of higher education (IHE) to promote adding credentials as a method of life-long learning. This chapter aims to evaluate the existing literature related to the academic progression of LPNs and the perceived and actual barriers that could inhibit that proregrression. The terms *academic progression*, *seamless academic progression*, *educational mobility*, *nursing educational advancement*, *LPN academic progression*, *practical nursing education*, *vocational nursing education*, *practical nursing academic progression*, *practical nursing barriers*, and *academic progression barriers* were used to find literature utilizing the OVID, CINAHL, ProQuest, Google Scholar and EbscoHost Consumer Health complete databases. The ancestry approach was also employed, further reviewing the sources used in the research found. Research from 2016 to 2021 was included, though some historically significant documents were also utilized in this review.

Historical Support

In 2007 the NLN (2011) began endorsing multiple entry points to nursing as a cost-containment measure and fostering diversity in nursing. Utilizing multiple entry points and paired with seamless pathways to academic transitions would students who

potentially would not have been able to participate in a traditional BSN program to have earlier entry into practice without sacrificing the education. By 2010, multiple nursing organizations and extensive studies were utilizing the concept of seamless academic progression to promote having BSN-prepared RNs without excluding populations.

The Benner et al. (2010) study *Educating Nurses: A Call for Radical Transformation* heavily endorsed utilizing articulation programs to attain a workforce that was all BSN prepared. The IOM Committee on the Robert Wood Johnson Foundation (RWJF) Initiative on the Future of Nursing, at the Institute of Medicine (2011) called for academic progression to increase education levels and training to meet the increased industry demands in their landmark *Future of Nursing: Leading Change, Advancing Health* report. The IOM report called for nurses to continue their education and always work to the fullest extent of their education, even while continuing their education. The IOM guidance led to the suggested practice of nursing education programs providing seamless academic progression and multiple pathways for progression and flexibility in education delivery.

The result of many nursing and healthcare organizations emphasizing seamless academic progression in nursing yielded much research, discussion, and ultimately the expansion of RN-to-BSN academic progression pathways. In addition to NLN (2011), IOM (2011), and Benner et al. (2010) encouraging this evolution in nursing education, in September 2012, the American Association of Colleges of Nursing (AACN) (2012) released a joint statement with the American Association of Community Colleges (AACCC), Association of Community Colleges Trustees (ACCT), National League for Nursing (NLN) and National Organization for Associate Degree Nursing (N-OADN)

supporting academic progression and advanced opportunities for "seamless transition into associate, baccalaureate, master's and doctoral programs" (para. 3). Despite substantial support for academic progression and ample research on the academic progression from RN -to-BSN, there is a significant gap in the literature discussing LPN transition to RN or BSN.

Significance of LPNs

There are an estimated 852,420 LPNs in the U.S. (U.S. Department of Health and Human Services, 2018). LPN programs are often more affordable than ADN or BSN programs, which can provide low-income students with an entry into nursing practice (National Academies of Sciences, Engineering, and Medicine, 2021). The LPN workforce is more diverse than the RN or BSN workforces, and PN programs frequently serve a more racially diverse student population than traditional four-year universities. This early entry to practice allows the LPN to begin earning an income as a nurse more quickly than other pathways.

LPNs are vital in providing care to residents in long-term care (LTC) facilities, skilled nursing facilities (SNF), to patients in primary care clinics, and can work with RNs to provide patient care in a variety of acute care settings. LPNs can work in healthcare while continuing their education and advancing their careers or transition to a more traditional ADN or BSN program. Traditional ADN or BSN programs may have an articulation agreement with the PN program or offer bridge programs for LPNs.

LPN Education and Academic Progression

Nursing care has evolved significantly over the last century. Nurses provide significant amounts of patient care in the current healthcare climate, with medical providers' primary functions being diagnosis and prescribing treatments (Benner et al., 2010). Nursing requires more clinical judgment than ever before. Acute care facilities that employ higher ratios of BSNs have better patient outcomes than facilities that employ higher ratios of associate or diploma-prepared RNs or LPNs. For these reasons, the IOM (2011) set a goal of 80% of the nursing workforce in the U.S. being BSNs by 2020.

LPNs are shifting toward higher levels of education, as the proportion of LPNs who enter the workforce with an associate or baccalaureate degree has increased (Smiley et al., 2021). In contrast, technical certificate and diploma-prepared LPNs are becoming less common. LPNs who choose to continue their nursing education are likely to encounter barriers to that progression. These barriers must be eradicated or addressed to allow this population of nurses to reach their full potential. The NASEM (2021) reports that academic barriers should be addressed at each transition in learning, and support should be offered to those nursing students who need it. The support for nursing students, particularly those from under-represented groups such as students from minority populations or low-socioeconomic statuses, will vary but may include social support, career placement assistance, coaching, financial assistance, or emotional support.

Industry Support of Dynamic Careers

The evolution of the nursing profession created by a changing medical industry and professional support of continued education has allowed nurses to have dynamic careers. Nurses no longer have a static career path but rather have many employment and education options. Academic progression is a single, though significant, component. Specialties, certifications, and additional non-degree training allow nurses to customize their career paths and make modifications to fit their needs. LPNs traditionally have worked in LTC or primary care clinic settings., however, the changing industry has allowed organizational flexibility for LPNs as well as flexibility with scheduling and the mode of employment (Jones et al., 2021). The changes allow nurses to set their priorities and shape their career paths around their desires and needs.

Jones et al. (2021) found a gap in data defining the transitions of LPNs to RNs, how often this transition occurs, and the career pathways chosen by LPNs. The researchers performed a retrospective, secondary design study examining nurses' career and employment patterns in North Carolina from 2004 to 2013. The data was obtained through the North Carolina Board of Nursing, utilizing the licensure renewal data submitted by LPNs during the assigned time. The study found that nearly half (49.1%) of the LPNs had continuous workforce participation during the time studied. When analyzing the data regarding changes in the highest degree obtained, only 2.2% of LPNs had a degree change in the ten years. Only 0.01% had two degree changes during that same period. Carnevale et al. (2018) report that only 18% of RNs started as an LPN/LVN nationally.

Mobility in nursing is associated with the nurse staying active in the workforce (Jones et al., 2021). Mobility in education, employment, location, or specialty all indicate nurses who are remaining in the workforce. A static career can lead to feeling stagnant or desiring change. The long-term loyalty that employers often desire might lead to stagnation or even burnout if mobility is not promoted within the organization. Organizations that are willing to support LPNs during transitions "are better able to maintain the knowledge and human capital of their LPN workforce, thereby capitalizing on the benefits of their investments" (p. 10).

Employers should foster LPNs as they continue or advance their education, which is more likely to improve organizational loyalty than trying to keep LPNs within a single role (Jones et al., 2021). Organizations can support employed LPNs in transitioning to RNs by offering flexible schedules, tuition assistance, or by simply offering employment within the organization as an RN upon completion. New-graduate RNs who were licensed as LPNs first have bedside experience that RNs graduating from a pre-licensure program do not; organizations who disregard this experience when determining pay are not likely to develop loyal employees.

While this study does not directly address the barriers LPNs face in academic progression or transitioning to RN, it does identify some behaviors that are significant to understanding the transition from LPN to RN. LPNs transition when there is a benefit to the transition (Jones et al., 2021). The benefits vary and are often personal. Allowing flexibility and supporting transitions can keep LPNs in the nursing workforce. Sustaining the nursing workforce was a focus before the COVID-19 pandemic. However, it is expected to be a significant concern post-pandemic as burnout is likely to reduce the

existing workforce (Fraher, 2020). IHEs can support this role transition by promoting a seamless academic progression, partnering with industry to meet the local needs, and offering flexibility in their programs. Frequently evaluating community, industry, and student population needs can strengthen nursing programs and support seamless academic progression.

Significance of Identifying Barriers to Progression

The Academic Progression in Nursing (APIN) program was a project stemming from the IOM (2011) report (Farmer et al., 2017). APIN was the coordinated efforts of the RWJF, the nursing Tri-Council, and the American Organization of Nurse Executives. APIN provided nine grants to nursing education programs to test academic progression models from RN to BSN. Experts also supported the programs that received grants by assisting them in making and expanding a framework to support academic progression. This study does not include LPNs, but is the largest and most significant study, and therefore must be considered. When reviewing academic progression to identify barriers for students with APIN, Farmer et al. (2017) found that a significant barrier was “inconsistent pre-requisites and general education requirements” (p. 9), which led to students having to take additional courses or retake courses to progress. Another barrier identified was the inefficient use of financial aid. Including guidance regarding financial aid in articulation pathways for academic progression can assist students in efficiently using financial aid. Streamlining the process to remove duplicated or redundant coursework and reducing or eliminating unnecessary residency requirements can decrease the likelihood that students will be enrolled longer than the financial aid period

allows. Complex systems for admission and transfer may become confusing and increase the probability that financial aid will be lost or misused.

After completing the four-year APIN program, the existing structure converted to the National Education Progression in Nursing (NEPIN) collaborative (National Education Progression in Nursing, n.d.). NEPIN (2019) conducted a qualitative study to identify barriers that could inhibit or motivate an RN to continue their education after working as an RN. Fifty-two nurses participated, and data was collected through focus groups, interviews, and surveys.

The themes of time concern and financial concern were the most mentioned as a challenge to progression (NEPIN, 2019). Time-related concerns included: not enough time while working full-time, work-life balance, and a lack of time-management skills. The concerns about work-life balance are justified, as, in 2020, 65.7% of LPNs work at least full-time, 15.1% work two positions, and 2.5% of LPNs work three or more positions (Smiley et al., 2021). Twenty-six percent of LPNs reported working more than 40 hours a week in 2020. Financial concerns included: affording the degree, student debt, knowledge deficit regarding financial aid, and concerns about the return on investment for the education cost (NEPIN, 2019).

Other themes that emerged from the study were: academic barriers, technological barriers, social-support barriers, and psycho-emotional barriers (NEPIN, 2019). Academic barriers included concerns about insufficient career advising, misalignment of degree with career goals, and concerns about being precepted by colleagues or subordinates during the educational experience. Technological barriers identified were inadequate personal technology skills leading to difficulty with online courses and the

lack of quality broadband internet access, particularly in rural areas. Social support barriers discussed were: managers who are unwilling to make schedule changes, fear of workplace incivility from unsupportive peers, lack of support from family, and inability to shift household responsibilities to attend classes. Psycho-emotional barriers identified by participants were the transition from expert to novice in the field and concerns about being an ineffective student after not being enrolled for a while. These concerns are not surprising but are confirmation that students' perceived barriers are similar to those assumed in nursing education since the IOM (2011) report.

Identifying Barriers Through LPN Experience

The pool of research addressing RN progression to BSN has dramatically expanded since the IOM (2011) report, yet there remains a significant gap in research addressing LPNs continuing their education. Chachula et al. (2019) performed a phenomenological study on the lived experiences of LPNs returning to school to pursue a BSN. This study was performed in Canada, which has similar nursing licensure and education structure to the structure used in the U.S. The researchers obtained a sample of eight participants enrolled in various cohorts of a single program. The researchers utilized two research assistants (RAs) to perform the participant interviews. The primary RA conducted interviews and had recorded descriptive field notes immediately after interviewing the participants. The primary RA was a masters-prepared RN who was not associated with the students' program. The secondary RA transcribed the interviews from digitally recorded data. Utilizing van Manen's guidelines, they identified themes in the data. The interviews were described as in-depth and semi-structured, but the interview questions were not listed or described in the study.

The study had five themes emerge with the review (Chachula et al., 2019). The first theme was seeking advancement. The participants spoke about the intrinsic, financial, and career factors as catalysts to continuing their education. This theme did not discuss barriers or potential barriers, only motivating factors. The second theme was returning to the role of a student. Students identified struggling with identifying as a student, particularly in clinical areas. One described having nursing students in the area they worked for, while soon after going to a clinical setting and being a student themselves. Another student identified that the additional education felt like a waste of time and struggled to progress beyond that.

Work-school-life balance was the third theme that emerged. Chachula et al. (2019) noted that all eight study participants called this balancing act "juggling" (p. 55). The NASEM (2021) report indicated that work-life balance was a significant barrier, especially to nurses already in the workforce. While some nurses may choose to continue their education immediately after completing a PN program, many choose to enter the workforce, regardless of intentions with academic progression. The study participants reported utilizing multiple supports from the IHE and family to help maintain balance while enrolled (Chachula et al., 2019).

The fourth theme identified by Chachula et al. (2019) was struggling to be understood. This theme emerged from participants' discussion that the BSN education about LPNs did not accurately reflect their actual roles. The fifth theme of the study was that the participants' views began shifting concerning their education, specifically that they felt more confident in practice, better able to think critically, and had an increased sense of professionalism. These themes indicate the progression of thought that occurs as

students advance in their nursing education but are not particularly insightful in identifying barriers to academic advancement.

Reported Progression Barriers

Iheduru-Anderson (2021) performed a qualitative study analyzing what factors were related to students enrolled in an RN-to-BSN nursing program withdrawing or taking time off after starting the program. The population of this study was online RN-to-BSN transition students, but having insight from students about the actual barriers that slowed or stopped academic progression is meaningful. The study had 26 participants from seven states in the U.S. The author interviewed participants via WebEx using semi-structured interview questions, and interviews were audio-recorded, then transcribed. The author analyzed the interviews for thematic content, with external audits by a qualitative analysis expert in another field for rigor.

Iheduru-Anderson (2021) categorized program delay or withdrawal themes as student-related, institution-related, and faculty-related. Student-related themes that emerged were financial constraints, competing responsibilities (enrollment, work, and family), poor time management, technology challenges, and poor study habits or writing skills. The student-related dynamics associated with lack of progression within a program seem to mimic the findings of the studies reporting barriers to progression beyond the entry-level nursing degree. All of the participants who had withdrawn from their nursing program cited cost as the most important factor in their likelihood of returning to complete their education.

Participants shared that they felt that the financial aid process was difficult and that assistance would relieve some of the financial burden and time constraints (Iheduru-Anderson, 2021). This belief was substantiated by the participant reports that stated employers were flexible regarding work schedules. However, participants felt that they must work more to meet the program's financial requirements and the financial needs of their families. The NASEM (2021) confirms that cost is a critical factor in making decisions about academic progression. That is especially true for students from under-represented groups or low socio-economic status. Taylor (2020) found similar responses when interviewing rural RNs on their intent to progress to BSN.

Additionally, these participants listed that they had concerns about their return on investment (ROI), reporting that they felt their education would cost more than the pay increase resulting from the additional education (Taylor, 2020). Reisher et al. (2020) found that African American nurses were more likely to report financial concerns as a barrier than Caucasian nurses who participated in their study of RNs progressing to BSN. LPNs continuing their education may have a unique concern, as many do not qualify for traditional financial aid due to their income being too high, yet they do not make enough to afford the education without assistance (Carnevale et al., 2018).

While faculty-related themes that emerged are primarily specific to students enrolled in the program, the theme of inflexibility by faculty emerged (Iheduru-Anderson, 2021). The author described faculty flexibility as a theme of the interviews, but only two participants reported faculty not being flexible. These students' reports of inflexibility were coupled with the mention of familial or work concerns. One participant stated, "[W]ith my children at home it was challenging going to work, finding childcare,

and completing my assignments. I tried to do my assignments at night" (p. 8). Five participants reflected that they had observed flexibility and support within the programs. One participant stated, "The program faculty are very supportive, but they can't solve my financial problems" (p. 9). The theme of inflexibility is weak. The study does not seem to support this theme well and instead extends the reported student-related concerns. This assertion is supported by Tower et al. (2015), which found that flexible work schedules and learning opportunities were helpful in work-life balance and academic success. Carnevale et al. (2018) report that a significant number of LPNs are single parents or the primary household income, resulting in the inability to change work hours or jobs to continue their education.

Institutional-related themes were availability of support, deceptive marketing strategies, disregard for prior learning, and lack of incentive for educational advancement. Institutional support and deceptive marketing strategies are concerns that would emerge after enrollment in a program and are not likely to contribute to an LPN's decision to continue their education. Disregard for prior learning emerged, and the participants described articulation agreements that required additional coursework outside of the program or repeating of courses. This disregard for prior knowledge was a concern discussed in the IOM (2011) report, which emphasized seamless academic progression with standardized pre-requisites and decreased duplication of coursework. Technical concerns were listed as a student-related barrier, yet the technology-related issues reported by participants were not the inability to provide or utilize required technology but a lack of course uniformity from course to course within the programs on the learning management systems. These concerns should be considered when identifying barriers to

program progression but are not likely to emerge until a student is enrolled in a program. Therefore, it is not likely to contribute to LPNs not continuing their education.

The participants described lack of incentive for educational advancement as concerns about minimal pay and role changes after the additional education. Incentives should be considered when analyzing barriers to progression. Still, an RN-to-BSN program does not have a change in licensure like LPNs who progress to RN would, nor is the pay difference always comparable. This barrier could exist for LPNs, but it should be explored further.

Populations That Progress

Identifying populations that are likely to progress can provide significant insight into what barriers might exist to academic progression and what support systems are working well. Jones et al. (2018) performed a retroactive study of North Carolina LPNs licensed between 2001 and 2013 to identify the characteristics of LPNs who choose to transition to RN. During the studied timeframe, 8% of the LPNs transitioned to RN, with an average of 1.4% of LPNs transitioning each year of the study.

The study was able to identify several characteristics that were associated with academic progression from LPN to RN. Though the LPNs who progressed in this timeframe were primarily female, the odds of males progressing were 1.20 times greater than females (Jones et al., 2018). White LPNs composed the largest racial group to progress, but those who identified themselves as Asian were the most likely to progress, 2.18 times more likely than white LPNs. Additionally, American Indian LPNs had 1.49 times greater odds for progression than LPNs that were white, and black LPNs had 1.09

times greater odds. Age of initial licensure also played a role in the likelihood of progression, with the odds being 1.19 times greater for those initially licensed between the ages of 16 and 22 years old than those who were first licensed between 34 and 68 years old. The odds jumped to 1.72 times greater for those licensed from 23-37 years old and 1.36 times for those licensed at 28-34 years of age.

A significant finding was that LPNs employed in an acute care setting were 2.67 times more likely to return for an RN education than LPNs who worked in an LTC setting (Jones et al., 2018). LPNs who worked in a medical-surgical setting were the most likely to become an RN, 3.14 times more likely than LPNs working in geriatric care. LPNs who worked in rural areas were 1.29 times more likely to progress to RNs than those who worked in other areas, though most LPNs who became an RN were from non-rural areas.

Jones et al. (2018) found that academic progression was more likely in certain parts of North Carolina despite other areas having close programs available. The researchers reported that identifying components of these programs that made them successful could be key. Once identified, the components could be replicated or modified by other programs to support academic progression. Key areas identified to evaluate were: financial supports, strategies utilized to recruit, student incentives, and academic support. The areas suggested by the researchers to evaluate closely align with the barriers to progression identified by Iheduru-Anderson (2021).

Basic Needs

Maslow's theory of human motivation describes physiological needs as the most prepotent of needs, necessary for survival and maintaining a state of homeostasis (Salkind, 2008). Fulfilling needs allows for holistic health, while the absence of basic needs can result in sickness. When basic needs are not fulfilled, a person cannot focus on the cognitive or self-actualization needs that motivate a person to seek out learning and education. An LPN who progresses to RN may experience upward social mobility through increased income and additional employment opportunities, but academic progression is not likely for an LPN struggling to meet basic needs. Basic needs insecurities are not specific to nursing, but LPNs who do not have their basic needs met are not likely to choose to continue their education at that time.

The Hope Center for College, Community, and Justice at Temple University created a survey for students to assess “basic needs security among college students” (Goldrick-Rab et al., 2019). This survey found that students at two-year IHEs are more likely to have basic needs insecurities than students of four-year IHEs. Marginalized students, including minorities, former foster youth, and those identifying as LGBTQ have higher rates of basic needs insecurity than peers that are not marginalized. Students who qualify for Pell Grants have higher rates of food insecurity than students who do not. Basic needs insecurity is associated with poor health and high rates of stress, which can undermine a student's academic success.

The researchers utilized an electronic survey, which was sent to nearly 1.5 million students, with almost 86,000 students participating (Goldrick-Rab et al., 2019). Hope Center partnered with 123 IHEs. The IHEs administered the online survey and to promote

participation in the survey, students of that institution were offered a chance to receive one of ten \$100 prizes. likely bolstered participation, but it may have skewed the responses. Those who have basic needs insecurities are more likely to participate for the opportunity to win money than those who do not have basic needs insecurities. While the data may be skewed to make basic need insecurities appear to be more prevalent than they are, identifying the insecurities can still provide valuable data to help identify barriers for students.

Goldrick-Rab et al. (2019) report that of the nearly 86,000 students who participated in the survey, 45% had experienced food insecurity in the last thirty days, 56% had housing insecurity in the previous year, and 17% had been homeless at some point during the last year. Food insecurity is the limited access to or ability to safely access food that is safe to consume and nutritionally adequate. Housing insecurity includes the inability to pay rent or having to move frequently. There is a notable overlap in respondents that reported food insecurities and housing insecurities or homelessness.

The majority of participants who reported food insecurity or housing insecurity, 68% and 67%, respectively, reported being employed (Goldrick-Rab et al., 2019). The students who reported basic needs insecurities also reported working more hours than those who did not report insecurities. Only 20% of students reporting food insecurities receive public assistance like supplemental nutrition assistance program (SNAP) benefits. Nursing education programs should identify basic needs insecurities associated with their student population and then support them. While this is not inherently an education barrier, basic needs insecurities are barriers to academic progression.

Theoretical Framework

Malcolm Knowles popularized the theory of andragogy in the early 1980s. He clarified the theory in 1984 with his work *Andragogy in Action: Applying Modern Principles of Adult Learning* (The Teaching Excellence in Adult Literacy (TEAL) Center, 2011). Knowles presented five assumptions about the adult learner: the adult learner becomes more self-directed as they progress, the adult learner utilizes life experiences in their learning, the adult learner is willing to learn as they assume new roles in life, the adult-learner learns based on need and wants to apply the knowledge as it is learned, and the adult learner is self-motivated. Knowles identified implications for practice secondary to these assumptions. Educators facilitating adult learners should consider the learner's needs, work with the learner to progress the education, evaluate the experiences for areas needing improvement, and evaluate for evidence that more learning is required.

The theory of andragogy is significant when discussing academic progression in nursing. Some states require academic progression in nursing when nurses enter at a level below BSN. An example of this is New York, which passed a bill in December 2017 requiring nurses whose entry-level into practice is less than BSN to continue their education and obtain their BSN within ten years of initial licensure to continue in practice (Newland, 2018). Most states do not require academic progression beyond initial licensure, no matter the level of education or licensure obtained for entry-level practice. When students return to an IHE to continue their education, it is often of their own accord. Barriers to progression may decrease the likelihood of students' participation in programs.

Identifying barriers to academic progression in nursing at each level directly correlates with Knowles' assertion that educators should be considering the learner's needs and assisting the learner in progressing education (The Teaching Excellence in Adult Literacy (TEAL) Center, 2011). Adult learners are self-motivated, but barriers and perceived barriers can seem insurmountable, particularly to those who do not have assistance in navigating academic progression or are first-generation learners. Nurse educators must identify these barriers and either remove the barrier or work with the learner to overcome the obstacles preventing academic progression.

Benner (1982) published *From Novice to Expert*, in which she utilized Stuart Dreyfus and Hubert Dreyfus' *The Dreyfus Model of Skill Acquisition* and applied it to nursing practice to describe the progression of nursing practice. Benner's model was utilized as the framework for hospital clinical practice ladders almost immediately after publication, though nursing career ladders began in the 1970s (Coleman & Desai, 2019). Clinical ladders are utilized to promote career advancement, incentivize professional development, and define levels of expertise. Most clinical ladders that use Benner's framework allow nurses to begin at various levels of academic preparation in nursing but prohibit career progression beyond a certain point until more advanced degrees are obtained. Benner (1982) describes the competence of an expert nurse in utilizing multiple ways to cope with a situation when she states, "[e]xperience, in addition to formal education preparation, is required to develop this competency" (p. 406). Nursing experience alone is not enough to make a nurse an expert. It involves education about the science and theories of nursing practice.

Benner (1982) is the basis for much of the existing material on academic progression in nursing. Benner also directed The Carnegie Foundation for the Advancement of Teaching's Study of Nursing Education, which utilized existing literature, conducted surveys nationwide, and performed observational studies to identify factors associated with the identified nursing practice-education gap (Benner et al., 2010). *From Novice to Expert* was utilized in the research framework for the Carnegie Foundation study. This research was heavily utilized by the IOM (2011) when compiling recommendations for their recommendations for nursing education in *The Future of Nursing: Leading Change, Advancing Health*. Benner's theory is a driving factor for promoting academic progression in nursing.

Framing this research utilizing Knowles's framework and applying the concepts of Benner's theory will allow for the significance of nursing academic progression to be tempered with the knowledge that adult learners choose their educational pathways. The same experiences that contribute to nursing expertise for Benner (1982) could be the driving factor for advancing nursing education or a barrier prohibiting that advancement according to Knowles' implications for nursing practice (The Teaching Excellence in Adult Literacy (TEAL) Center, 2011).

Summary

Academic progression to BSN is essential for nurses who enter the workforce as an LPN (AACN, 2012; Benner et al., 2010; IOM, 2011; National Academies of Sciences, Engineering and Medicine, 2021; National League of Nurses, 2011). For LPNs to have seamless academic progression, barriers must be identified and then addressed. When identifying barriers to progression, the LPN must be considered holistically and not just

academically. Nursing education programs must assess their student population and address the barriers of that population. Factors such as socio-economic status, age, family, health, and employment are as significant to consider as technology and financial aid concerns.

III. Methodology

Research Design

This research aimed to identify what LPN students and recent LPN graduates perceived as barriers to academic progression to an RN program. The literature review revealed many potential barriers to academic progression for LPNs, though not all were directly associated with the progression from LPN to RN. A quantitative descriptive research design was framed utilizing Knowles' theory of andragogy (The Teaching Excellence in Adult Literacy (TEAL) Center, 2011) and Benner's (1982) *From Novice to Expert* to determine if the barriers identified by the population in the literature review applied to the academic progression of LPNs.

Research Question

What do practical nursing students and recent practical nursing graduates perceive as barriers to academic progression to a registered nursing program?

Setting

The population studied attend or have graduated from a small public two-year community college in rural Arkansas. The campus is in the River Valley region of western Arkansas and serves primarily non-traditional students. No on-campus housing is available for students, so all students must commute to campus. Preliminary enrollment for the campus in the Fall 2020 semester was 1,974 students (Arkansas Tech University, 2020). The campus has eight allied health programs, including two nursing programs. The campus houses the PN program, which accepts two cohorts of 22 students per year, and a hybrid LPN-to-RN program, which accepts 24 students annually. The median student age at the start of the PN program for this campus in 2021 was 26.4 years.

Population

A convenience sampling of currently enrolled PN students and the graduates from the previous three cohorts of the PN program were invited to complete an online survey through QuestionPro. Participants must be 18 years of age to participate in the PN program; therefore, all participants were adults. Students provide email contact information to the PN program on the program application and confirm before graduating to allow for employment surveys to be completed or other contact with the program. Current students and graduates of the previous three cohorts were sent an email explaining the survey and requesting their voluntary participation in an online survey. Participants who clicked the link in the invitation email were directed to QuestionPro and full online consent. A total of 123 students and recent graduates were eligible to participate, with 62 invitations sent to students currently enrolled in the program and 61 invitations sent to recent graduates of the PN program. Two emails for recent graduates were returned as undeliverable, and no other email addresses were available for these invitees. As a result, only 59 recent graduates were successfully invited to participate, for a total of 121 invitations.

Human Subjects

This research study was approved by the Arkansas Tech University Institutional Review Board in November 2021 (Appendix A). There was minimal risk associated with the research, and the principal risk was that the college employs the primary researcher as faculty for the LPN program. There was a risk that students might feel obligated to participate due to the researcher's role at the college. The survey also included questions

that address food insecurities, housing insecurities, and financial concerns, which could cause participants to feel vulnerable.

The survey was voluntary and was not associated with any course within the PN program to negate these risks. No grade or extra credit was associated with participation, nor was participation or lack thereof be associated with program progression. The survey invitation was distributed by email to the student's addresses provided to the PN program for contact before, during, and after participation in the program. Surveys were completed utilizing the online secured QuestionPro survey software in a web browser. Before completing the survey on QuestionPro, the participants had an online consent screen that detailed the research. Those who chose to participate consented to participate were then taken to the survey, and those who chose not to participate after learning about the research could close the browser to not participate. The anonymous feature in QuestionPro was utilized to allow for entirely anonymous responses, and no identifying data was requested as part of the survey. Data collected was reported as aggregate data.

The survey was formatted to allow participants to not respond to questions, not participate or withdraw from the study at any point with no repercussions. Questions that required responses that could cause a participant to feel vulnerable were presented in a multiple-choice or select all that apply format to minimize the risk that identities could be inadvertently linked to responses. Resources such as the food pantry on campus and community resources will be added to the end of the survey.

The first page of the survey was a written explanation of the expectations, risks, and benefits of the research. This page concluded by stating that participating in the

survey expresses consent. As the participants were college students or graduates, there were no communication concerns with presenting the consent form in a written format.

Instrumentation

The researcher created the survey based on the potential barriers to academic progression identified in the available literature. The survey was formatted in multiple-choice or select all that apply questions. The survey was 17 questions; 12 multiple choice questions addressing demographics and nursing education, three select all that apply questions addressing potential barriers as identified by literature, one select all that apply question concerning support systems, and one open-response for participants to describe any concerns that might not have been addressed in the select all that apply questions. The QuestionPro program was employed to host the survey and anonymously collect data. The first page of the survey contained the consent form. See Appendix C for the consent and self-created survey.

Data Collection

The research consists of a one-time survey. The current three cohorts of students and the previous three cohorts of graduates of the PN program were sent an email inviting them to participate on January 31, 2021. A follow-up email with an invitation was sent on January 15, 2021. The survey was available for the invited participants for a total number of 20 days. The QuestionPro program was used, which collects data from participants. For this survey, data were collected anonymously, and the program presented aggregate data to the researcher.

Data Analysis

The data were reported as aggregate data using the QuestionPro program. The responses were analyzed using descriptive statistics to determine the prevalence of participants' perceived barriers. These data were assessed for frequency by population utilizing the available demographic data and compared to the data provided by participants about resources used while completing the LPN program to assess for correlations or emerging patterns.

Summary

A self-created survey was designed utilizing themes and barriers identified in current literature. One hundred and twenty-one current students and recent graduates were sent invitations to participate in this research. The survey had 29 completed responses from participants. Measures were taken to prevent coercion or perceived pressure to participate by the survey being hosted online in an anonymous fashion and excluding the survey from any coursework or progression associated with the LPN program. The data was analyzed to determine barriers to academic progression as perceived by participants and correlate demographics with the barriers perceived.

IV. Findings

For this quantitative descriptive study, an 18-question online survey was utilized to collect data from students currently enrolled in the PN program and recent program graduates. The purpose of this research was to identify what practical nursing students and recent practical nursing graduates perceive as barriers to academic progression to a registered nursing program. This chapter discusses the sociodemographic information of participants, the reported likelihood of academic progression, the socioeconomic concerns of participants, the campus support systems utilized by participants, and the perceived barriers to progression.

The survey responses provided information about the participants' intentions to progress to RN, barriers, and concerns experienced while in the PN program, and their perceived barriers to progressing to RN. The survey also included sociodemographic questions to attempt to correlate perceived barriers with populations of participants. The invitation email for the survey (Appendix B) was successfully sent to a convenience sample of 121 current students or recent graduates of the practical nursing program. Of those invited, 30 people consented to participate, and 29 participants completed the survey. Only the results of the completed surveys ($N = 29$) will be discussed. Anonymous aggregate data was reported from QuestionPro, and frequencies were evaluated. Frequencies will be reported in tables and figures throughout this chapter. Response data is presented comparing the results of the current students ($n = 17$), recent graduates ($n = 12$), and total participants ($N = 29$) except where comparison is not insightful; this data is presented as combined data.

Sociodemographic Results

Participants were asked to complete ten multiple-choice sociodemographic questions on the survey. These questions were included to provide insight into the participants, provide information on if the participant was a current student or recent graduate, determine if the sample was representative of the population, and correlate concerns and perceived barriers with specific populations, if applicable.

The first two survey questions were to determine the participant's relationship to the PN program. When responding to the first survey question, participants ($N = 29$) were asked to identify their affiliation with the program, of which 58.6% ($n = 17$) of participants responded they were current students, and 41.4% ($n = 12$) responded they were recent graduates. Of the 12 recent graduate participants, two (16.7%) reported they were currently enrolled in an RN program, and 10 (83.3%) reported they were taking prerequisite courses in preparation to apply for an RN program. Further demographic information is presented in Table 1. Response options that participants did not choose are omitted from the table for conciseness.

Table 1*Response Rates: Sociodemographic Characteristics (N = 29)*

Characteristic	Current student		Recent graduate		Full sample	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Program affiliation	17	58.6	12	41.38	29	100
Gender						
Female	16	94.1	12	100	28	96.6
Choose not to respond	1	5.9	0	0	1	3.5
Relationship & Children						
Single, no children	3	17.6	3	25	6	20.7
Single, children	1	5.9	3	25	4	13.8
Married, no children	1	5.9	1	8.3	2	6.9
Married, children	8	47.1	5	41.7	13	44.83
Cohabiting, no children	3	17.6	0	0	3	10.3
Chose not to respond	1	5.9	0	0	1	3.5
Current Age						
18 – 24 years	7	41.2	4	33.3	11	37.9
25 – 34 years	6	35.1	7	58.3	13	44.8
35 – 44 years	2	11.8	1	8.3	3	10.3
45 – 54 years	2	11.8	0	0	2	6.9
Race & Ethnicity						
White	17	100	11	91.7	28	96.5
Black or African American	0	0	1	8.3	1	3.5
Non-Hispanic	17	100	12	100	29	100
Employment Status						
Employed full-time	0	0	7	58.3	7	25
Employed part-time	12	70.6	3	25	15	53.6
Unemployed	4	23.5	2	16.7	6	21.4
Chose not to respond	1	5.9	0	0	1	3.4
Highest level of education						
High school diploma	9	52.9	0	0	9	31
Technical certificate	2	11.8	0	0	2	6.9
Associate's degree	5	29.4	11	91.7	16	55.2
Baccalaureate degree	1	5.9	1	8.3	2	6.9
Highest nursing education level						
Certified nursing assistant	2	11.8	0	0	2	6.9
Current PN enrollment	15	88.2	0	0	15	51.72
LPN, taking RN prerequisites	0	0	10	83.3	10	34.5
LPN, in RN program	0	0	2	16.7	2	6.9
Residential area						
>35,000 residents	1	5.9	1	8.3	2	6.9
15,000 – 35,000 residents	2	11.8	2	16.7	4	13.8
5,000 – 15,000 residents	1	5.9	2	16.7	3	10.3
Town, < 5,000 residents	7	41.2	1	8.3	8	27.6
Rural, not within city limits	6	35.3	6	50	12	41.4

Participant Demographics

Participants ($N = 29$) were asked to identify their identity. One participant chose not to identify their gender, and the remaining 28 participants (96.6%) identified themselves as female. All participants identified as non-Hispanic, and 96.6% ($n = 28$) of the participants identified themselves as white, while one participant (3.4%) identified as Black or African American. Of the participants, 58.6% ($n = 17$) reported having children, 37.9% ($n = 11$) reported having no children and 1 participant (3.4%) chose not to respond. When reporting relationship status, three (10.3%) of the participants reported cohabitation, 15 (51.7%) reported being married, 10 (34.5%) reported being single, and one (3.4%) chose not to respond. The majority of the participants live in rural areas, with 41.4% ($n = 12$) living outside city limits and only 6.9% ($n = 2$) living in a town or city with a population greater than 35,000 people.

The majority of the participants were under 35 years of age, with 82.8% ($n = 24$) reporting their age as 34 years or younger. Seven (41.2%) of the current students and four (33.3%) of recent graduates reported being 18-24 years of age, while six (35.1%) current students and seven (58.2%) former students reported being 25-34 years old. Five (17.2%) participants reported being 35 years or older, with only one (8.3%) recent graduate 35 years or older participating.

Employment

A question asked that participants best describe their employment status. One participant chose not to disclose employment information. Of the 28 participants who answered the question, 22 (78.6%) reported that they were currently employed, with 53.6% ($n = 15$) employed part-time and 25% ($n = 7$) working full-time. None of the

current students reported working full-time, while seven (58.3%) of the recent graduates were employed full-time.

Participant Education

All recent graduates who participated were licensed as LPNs, and two recent graduates (16.7%) were enrolled in an RN program while taking the survey. Of the 17 current students who participated, two (11.8%) had been certified as certified nurse’s aides (CNAs). Eight (47.1%) of the current students who participated reported having completed training above a high-school diploma, with 11.8% ($n = 2$) reporting a technical certificate, 29.4% ($n = 5$) reporting an Associate’s degree, and 5.9% ($n = 1$) reporting a Baccalaureate degree. Recent graduate participants reported that 91.7% ($n = 11$) had completed an Associate’s degree, with one participant (8.3%) having previously completed a Baccalaureate degree.

Likelihood of Academic Progression

Participants were asked two multiple choice questions regarding their likelihood of applying to participate in an RN program. One question asked the likelihood of application in the next two years, and the other asked the likelihood of application in the next five years. All participants ($N = 29$) chose to answer these questions; see Table 2.

Table 2

Response Rates: Likelihood of Application for RN Program (N = 29)

Timeframe	Intend to apply		Like to apply, uncertain of ability		Currently enrolled	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Within two years	19	65.5	7	24.2	3	10.3
Within five years	24	82.8	2	6.9	3	10.3

No participants reported that they were not interested in academic progression. It is unknown why three participants responded to these questions as enrolled in an RN program, while only two stated they were enrolled in a program in earlier questions. Seven participants (24.2%) reported that they would like to apply in the next two years but were unsure if they would be able to, and two participants (6.9%) reported that they would like to but were uncertain of their ability within the next five years.

Socioeconomic Concerns

Many of the perceived barriers identified in the literature for nursing academic progression are centered around socioeconomic concerns. All current students and recent graduates invited to participate were enrolled in the PN program during the COVID-19 pandemic. In two select-all-that-apply questions, participants were asked to identify socioeconomic concerns that have affected them in the last year not related to COVID-19 and those that have affected them related to COVID-19. The response rate frequencies are reported in Table 3. Figure 1 compares the most common responses related to the COVID-19 pandemic and unrelated to the COVID-19 pandemic.

Table 3

Response Rates: Socioeconomic Concerns and Their Relation to COVID-19 Pandemic

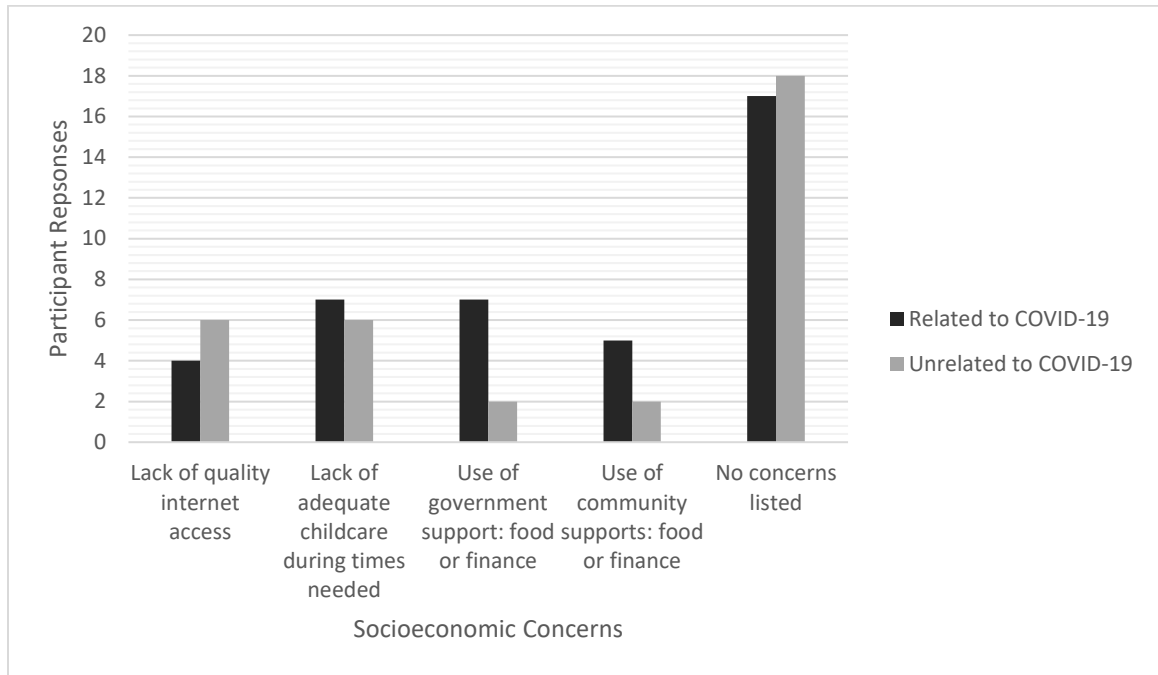
(*N* = 29)

Socioeconomic Concern	Related to COVID-19		Unrelated to COVID-19	
	<i>n</i>	%	<i>n</i>	%
Lack of consistent access to food	1	3.4	1	3.4
Lack of consistent transportation	1	3.4	1	3.4
Lack of quality internet access	4	13.8	6	20.7
Lack of adequate childcare during needed times	7	24.1	6	20.7
Use of government support: food or finance	7	24.1	2	6.9
Use of community support: food or finance	5	17.2	2	6.9
Not experienced any of these concerns	17	58.6	18	62.1

Figure 1

Frequency of Socioeconomic Concerns Related and Unrelated to COVID-19 Pandemic

(*N* = 29)



Participants' most common socioeconomic concerns were lack of quality internet access, lack of quality childcare during the times needed, and the use of government and community food or financial support systems. Eighteen (62.1%) of the participants had no socioeconomic concerns unrelated to the COVID-19 pandemic, and 17 (58.6%) reported no concerns related to the COVID-19 pandemic. Access to quality internet was a concern for 20.7% ($n = 6$) of participants, regardless of the pandemic. Lack of adequate childcare during needed times was reported by six (20.7%) of applicants, with seven participants (24.1%) reporting this concern associated with the COVID-19 pandemic. The use of government assistance for food or finance increased from one (3.4%) to seven (24.1%) during the pandemic. Similarly, the use of community resources for financial or food support increased from one participant (3.4%) to five participants (17.2%).

Campus Student Support Systems

Participants were asked to identify the student support systems utilized while attending the program campus in a select-all-that-apply question. Support systems listed as response options included grants, scholarships, financial aid, tutoring services, the student success center, computer labs, the food pantry, and the library. The response rate frequencies are detailed in Table 4.

Table 4

Response Rates: Utilization of Campus Student Support Systems (N = 29)

Campus Support	Participants who utilized support	
	<i>n</i>	%
Pell grants	19	65.5
Student loans	12	41.4
AR Future Grant	11	37.9
Arkansas Academic Challenge Scholarship	4	13.8
Private scholarships	3	10.3
Career Pathways Initiative	11	37.9
Trio Student Support Services	6	20.7
Campus scholarship	6	20.7
Single Parent Scholarship	3	10.3
GI Bill	1	3.4
Non-work study student employment	1	3.4
CARES Act	13	44.8
Arkansas Workforce Challenge Scholarship	3	10.3
Other financial aid	2	6.9
Student Success Center	4	13.8
Open access computer labs	4	13.8
Library	6	20.7

Participants reported utilizing campus support systems, though no participants reported having Americans with Disabilities Act (ADA) accommodations or using the Green and Gold Food Pantry on campus to supplement their food needs. No participants reported using the CCAMPIS Grant to help with childcare costs. As presented in Table 4,

participants utilized numerous forms of financial aid, but no participants reported having scholarships or educational assistance from their employer.

Barriers to Progression

Participants were asked to identify concerns that might keep them from progressing academically to RN in a select-all-that-apply question. No student reported having no interest in progressing or being concerned about finding a program that fits their needs. The response rates for other concerns as identified in the literature review are presented in Table 5.

Table 5

Response Rates: Potential Barriers to Progression (N = 29)

Concerning factor	Participants who are concerned	
	<i>n</i>	%
Lack of financial aid or ability to pay	22	75.9
Scheduling conflicts with work	12	41.4
Maintaining work/life balance	19	65.5
Lack of childcare	4	13.8
Need to retake courses or take similar courses	6	20.7
Length of time to complete program	2	6.9
Not able to work full-time, including loss of benefits	13	44.8
Pay increase not worth effort	2	6.9
Increased student debt	14	48.3
Lack of quality internet access	1	3.4
Other household concerns	2	6.9
No concerns with progression	2	6.9

Participants identified a variety of concerns that might hinder academic progression. Only two (6.9%) participants reported having no factors of concern for academic progression to RN. Financial concerns including lack of financial aid ($n = 22$, 75.9%) not being able to work full time ($n = 13$, 44.8%) and increased student debt ($n = 14$, 48.3%) were some of the most frequent responses.

Participants were allowed to identify additional concerns for progression in an open-response question. While there were nine responses to this question, no additional barriers to progression were identified. Some participants expanded on listed concerns, such as listing specific courses they felt were duplicates or similar enough not to require repetition. Others wrote that they had no additional concerns other than what was listed in the question. Due to the campus and program specificity of the responses, these will not be discussed.

Summary of Findings

The purpose of this study was to identify what current students and recent graduates of a PN program perceived as barriers to academic progression. The survey completion rate was 24%, with $N = 29$ completing the survey. Seventeen of the participants were current PN students, while 12 were recent graduates of the PN program. Participants indicated what support systems were utilized throughout their education on the college campus and socioeconomic concerns that they had experienced. The participants also identified 11 concerns for academic progression, with only 6.9% ($n = 2$) of respondents not identifying concerns that could keep them from progressing.

V. Conclusions

The nursing profession has endorsed academic progression in nursing for decades, yet a significant gap in the literature existed when identifying LPN progression and the barriers to that progression. The purpose of this research was to identify what practical nursing students and recent practical nursing graduates perceive as barriers to academic progression to a registered nursing program. A quantitative descriptive research design was utilized to develop a survey to identify the perceived barriers. Convenience sampling was employed, with 121 current PN students and recent PN program graduates from a single PN program invited via email to participate. Of those invited, 29 consented and completed the survey providing information on demographics, socioeconomic concerns, campus support utilization, and barriers to academic progression.

Discussion

The existing literature heavily discussed and evaluated the experiences of RNs transitioning to BSN while excluding the experiences associated with the LPN to RN transition. It has been assumed that the LPN to RN transition would mimic the experience of the RN transitioning to BSN without evidence to support that it mimics the experience. Nurses who may be interested in academic progression are adults with personal life experiences. Nurse leaders and educators cannot assume that the RN to BSN transition experience is equivalent to the LPN to RN transition. The theory of andragogy asserts that information should be gathered and utilized to facilitate the education and academic progression and that learning experiences should be evaluated for areas that could be improved (The Teaching Excellence in Adult Literacy (TEAL) Center, 2011). Nurse

educators must evaluate the LPN to RN transition to improve the transition and foster seamless academic progression.

Sample Representation

Despite the low response rate (24.0%), the demographic data provided by the participants indicates that the $N = 29$ sample is adequate to represent the program. The PN program populations under-represented in the sample were Hispanic students and male students. While Hispanic students and male students are minorities within the program, they have no representation among those who participated in the survey. The majority of the participants (82.8%, $n = 24$) report being under 35 years old. The average incoming age of students in the PN program in 2021 was 26.4 years, which indicates the sample age adequately represents the population age. The sample also included similar representation for current students ($n = 17$, 58.6%) and recent graduates ($n = 12$, 41.4%). The study findings revealed three major areas of concern for the study participants: financial concerns, work-life balance, and family and child concerns, especially regarding childcare.

Financial Concerns

The concerns most frequently reported by study participants were financial concerns. Advancement in higher education can hardly be discussed without addressing the associated financial concerns. A student can choose not to work as an LPN while progressing to RN, but many feel they must stay employed to meet the program costs and assist their families financially (Iheduru-Anderson, 2021). NASEM (2021) describes that the need to stay employed while pursuing an education applies more often to minority students or those from low socioeconomic status. This survey found that 21.4% of

participants ($n = 6$) reported being unemployed, including two (16.7%) recent graduates. Several explanations could account for the increase in unemployment on this survey. The first is the low response rate for the survey. Those who work may have been less likely to complete the survey. The second is that it may cost less for the participant not to work than to be underemployed and pay for childcare. The third is related to the COVID-19 pandemic. Use of government support programs increased from 6.9% ($n = 2$) to 24.1% ($n = 7$) related to COVID-19. Similarly, use of community support resources increased from 6.9% ($n = 2$) to 17.1% ($n = 5$) during the COVID-19 pandemic.

Students may find that the financial aid processes of IHEs are cumbersome and that they lack knowledge and support in those areas (Iheduru-Anderson, 2021; NEPIN, 2020). The survey participants all responded that they had utilized some form of financial aid other than student loans during their education on the campus. In total, excluding student loans, the participants ($N = 29$) reported utilizing 95 types of financial aid. The campus where the PN program was located is a community college campus that is eligible for many grants and prioritizes helping students be successful in their education, including offering significant support for students applying for financial aid. None of the participants of this study reported being recipients of assistance from the CCAMPIS grant, which assists with childcare, but 37.9% ($n = 11$) reported participating in the Career Pathways Initiative, which assists parents who meet some criteria with the cost of books, technology, uniforms, licensure fees, and gas expenses related to their education. While these options may not be available for all campuses, this supports the evidence that LPN programs may be more affordable and obtainable for low-income students (NASEM, 2021).

Despite the significant amounts of financial aid utilized by the participants, 75.9% ($n = 22$) responded that lack of financial aid or inability to pay were concerns with academic progression, and 44.8% ($n = 13$) responded that they were concerned about not being able to work full-time, which includes potential benefit loss. The additional income from working as an LPN may increase an individual's income to the point of no longer being able to receive financial aid or other supports such as the Children's Health Insurance Program (CHIP) or Supplemental Nutrition Assistance Program (SNAP), which may lead to the individual meeting the socioeconomic classification of working poor. More than 7 million individuals in the U. S. were considered the working poor in 2018, with this occurring more among women and minorities (U.S. Bureau of Labor Statistics, 2020). Individuals who attain higher levels of education are less likely to be classified as the working poor, therefore these individuals need to be supported in their transition as well as in their pursuit of more education.

Students may be required to duplicate coursework or take redundant coursework as part of transitioning to a new program (Farmer et al., 2017). This can lead to inefficient use of financial aid, delay progression, and decrease the likelihood of nurses choosing to progress academically. The participants in this survey also identified this as a concern, with six (20.7%) participants identifying retaking courses or taking similar courses as a concern for academic progression. There was a comment on the open-ended question at the end of the survey where a participant expanded on this, reporting that they felt the science prerequisites for the LPN program that did not require a lab set the student up for having to take a similar course with a lab to progress. While the courses with labs would have been accepted as prerequisites for the LPN program, the participant

was not advised that the courses with a lab might be a better option should they choose to progress. The student expressed frustration at what they felt was poor advising and wasting their time and money. This reported frustration corroborates the findings of Farmer, et al. (2017), which correlate poor academic guidance with enrollment in redundant courses and the decreased likelihood of academic progression.

The literature revealed that RNs progressing to BSN might have concerns about the ROI for the increased education (Taylor, 2020). Little was found in the literature discussing LPN to RN transitions and the financial ROI. Only two participants (6.9%) in this survey responded that the pay increase resulting from progressing to RN might not be worth the effort as a factor that might hinder academic progression. This lack of concern could be related to the historically significant pay increase from LPN to RN, compared to the often-slight pay increase from RN to BSN, or perhaps this could reflect on the millennial shift to pay not being a primary driver in career concerns (Gallup, 2016). Both should be considered and evaluated further in the future.

Work-Life Balance

The second significant finding of the study was the participants' concern for maintaining work-life balance. Work-life balance may seem like a complicated barrier, as individuals have different ideas about what factors contribute to the balance. One person might have children, a significant other, and parents that need care, while another might be single with a pet. Ultimately, work-life balance requires an individual to prioritize the concerns in their life beyond tasks or opportunities that might advance their career. Jones et al. (2021) explain that LPNs transition when there is a value to that transition. While

employers and IHEs often treat careers as linear paths, careers and life experiences are dynamic.

Work-life balance and maintenance of personal well-being at a job were identified as very important by 57% of millennials (Gallup, 2016). The results from this study reflect similar findings, with 65.5% ($n = 19$) identifying work-life balance as a concern for academic progression. Chachula et al. (2019) noted that all participants in their phenomenological study referred to maintaining this balance while continuing their nursing education as “juggling” (p. 55). This terminology reflects on the dynamic components addressed by Jones et al. (2021) with finding value in transition.

Gallup (2016) suggests organizational culture changes should occur to support the desire for work-life balance. Data from several ongoing surveys over several years indicates that the younger generations prefer coaching, ongoing feedback, and support for personal development. While the information is primarily meant for employers to apply to their organizations, the nursing profession should also assess for adaptations that might be needed in education and leadership based on the needs of the incoming workforce. Simply put, they “are not willing to sacrifice life for work” (Gallup, 2016, p. 31). Higher education should evaluate their delivery methods for transition programs to accommodate the needs and desires of the students who will be utilizing them. It is necessary to support LPNs who choose to transition to RN to be successful while maintaining a work-life balance. In addition to programs offering coaching and feedback to students throughout the program, flexible scheduling and finance options should be considered. Routine evaluation of the regional healthcare industry and student population needs should be completed to support seamless academic progression.

Family and Children

The last major barrier identified in this study was concerns related to family and children. While a significant component of work-life balance is family and children, concerns unrelated to work-life balance were identified. Iheduru-Anderson (2021) reported finding that family-related concerns, including finding childcare and finding time to complete assignments, were concerns identified by nurses who wanted to continue their education. The study results support this assertion. Seventeen (58.6%) survey participants reported having children, and 35.3% of those participants ($n = 6$) reported having a lack of adequate childcare during needed times unrelated to changes associated with COVID-19. Four participants (23.5% of participants with children) specifically identified lack of childcare as a concern with progressing to RN.

Carnevale et al. (2018) found that many LPNs are single parents or the primary income earner for the household. Of the survey participants, 13.8% ($n = 4$) reported being single with children. While this is still a significant portion of participants, the small sample size may have contributed to a smaller percentage than other findings. Gallup (2016) found that 4% of singles under 20 years had children, and 47% of single 34-year-olds had children. There may have been a lower response rate from single parents, as they often have to take on many roles and may not have prioritized completing a voluntary survey.

Two participants (6.9%) also listed other household concerns as a potential barrier to progression. No participant offered more details on this concern in the open-ended question on the survey. Other familial concerns that should be considered include caring for elderly parents, caring for family members with disabilities or chronic illness, or

students who may want to expand their family through pregnancy, adoption, or fostering. Lack of familial support and the inability to shift household responsibilities should also be considered potential barriers to progression (NEPIN, 2020).

Conclusion

The findings from this study are similar to the research available on RN to BSN transitions. Though many of the potential barriers for progression exist at both transition points, more research is needed to further explore the common barriers identified by this study. Concerns about financing the continued education, reviewing prerequisite courses to minimize course duplication or redundancy, and the need for flexible course offerings to support working students should continue to be addressed at all levels of nursing education. Leaders of IHEs and nursing educators must continue to work toward seamless academic progression.

As older generations exit the workforce, work-life balance will be a growing concern. Nurses from the millennial and Generation Z generation seem to have similar concerns with work-life balance as others from their generation. LPNs who choose to continue their education to become an RN will likely continue to have concerns with childcare, flexible delivery of content, customizable schedules, and the ability to maintain a quality education with these changes. As a profession, nursing should continue to share the significance of progression to PN students and LPNs, in terms of improved patient outcomes and including the value to the individual. The pay raise associated with the transition may not be enough to convince LPNs concerned about work-life balance.

Basic needs must be met for students to be successful. Students transitioning from impoverished, where they are often eligible for multiple forms of support, to the working

poor should be considered. These students may require additional assistance during that transition, such as locating community supports or additional forms of financial assistance. The transition from impoverished to the working poor could occur during enrollment in a nursing program for LPN to RN students who choose to academically progress immediately after completing the PN program. Concurrent loss of multiple sources of support is likely to strain the student financially and might increase attrition rates for nursing programs.

Implications

Academic progression in nursing is not a static or linear experience. An individual's experience of continuing their nursing education is multifactorial and dynamic. Many of the barriers that have been identified for RNs progressing to BSN may apply to LPNs who choose to progress to RN. Nursing education programs and IHEs should routinely assess for potential barriers specific to their program, student population, community, or region. Academic advising should collaborate with students to plan an academic track that meets the students' needs without unnecessary duplication of courses. Programs with affiliation agreements should work to decrease the number of courses that must be repeated or duplicated and decrease barriers to transition.

Few nurses can quit working to continue their education. While many RN to BSN programs offer extreme flexibility, including fully online and work-at-your-own-pace programs, LPN to RN programs cannot offer the same degree of flexibility due to the licensure and scope of practice changes that occur in this transition. Students must participate in clinical experiences that may affect the individual's ability to work and maintain a work-life balance. Healthcare leaders should support nurses who choose to

progress academically by being flexible with scheduling to support a successful transition and considering offering reimbursement for nurses willing to continue their education.

The Practice-Academic Partnership Model is one educational model that may support the nurse who needs to work but wants to continue their education. In this model, nursing education programs partner with healthcare facilities or systems to provide clinical educational experience while the facility pays the student to assist with providing care (Spector, et al., 2021). While the nursing program collaborates with the facility to guide the student's learning experience, the facility can ease the workforce strain by employing the students, which increases the student's ability to practice within that facility. The student can get paid for the work they provide while simultaneously getting clinical credit. This model addresses many of the barriers identified by the participants, including concerns for work scheduling, financial concerns, and the ability to work while advancing their education. Many of the larger hospital systems have childcare programs in place to assist employees, so this potential barrier could also be alleviated by implementing this model.

Recommendations

More research is needed to confirm the similarities and differences in the transition from LPN to RN and RN to BSN identified by this study. While the perceived barriers may be similar, the lived experiences vary and should be considered when analyzing programs to allow for a seamless transition. Future research should strive to include representation from minorities in the population. A specific concern identified in this study that should be researched further is the cost of childcare and the availability of childcare for nursing students, no matter the level. Childcare facilities may not be open

when students are scheduled for clinical experiences or may close before a clinical day is over. Additional research addressing students who have other caregiver roles should also be considered to identify additional barriers these students may experience. While the literature addressed the concern of needing childcare, it is the only barrier identified that had few suggestions for actions to promote success.

The results of this study support many of the findings of Chachula et al. (2019), Jones et al. (2018), and Jones et al. (2021), but additional research should occur. Additional quantitative research should follow with larger populations across multiple regions in the U.S. A sample that includes more minorities and improved representation would provide better insight for the LPN to RN transition. Non-traditional PN students or nurses and male PN students or nurses should be encouraged to participate in future studies in addition to racial and ethnic minorities to best identify potential barriers to progression. Identifying perceived barriers to academic progression is only the first step to providing the streamlined, seamless pathway to academic progression that is desired.

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Appendix A
Letter of Approval



OFFICE OF RESEARCH AND SPONSORED PROGRAMS

1509 North Boulder Avenue
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Russellville, AR 72801

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November 9, 2021

To Whom It May Concern:

The Arkansas Tech University Institutional Review Board has approved the IRB application for Rebekah Blaine Snyder's proposed research, entitled "A Descriptive Study on the Perceived Barriers to Academic Progression from LPN to RN." The Institutional Review Board used an expedited review procedure under 45 CFR 46.110 (7).

Please note that in the event that any of the parameters of the study change, the researcher may be required to submit an amended application.

Please proceed with your research. We wish you success with this endeavor.

Sincerely,

A handwritten signature in black ink that reads "Sarah Gordon".

Sarah Gordon, Ph.D.
Institutional Review Board Chair
Arkansas Tech University

Appendix B

Invitational Email

Hello,

You are invited to participate in an online survey for current students and recent graduates of the Practical Nursing Program at Arkansas Tech University - Ozark Campus. Your input is valuable and would be greatly appreciated. I am working to identify what current and recently graduated practical nursing students identify as barriers to continuing their education in registered nursing. Your response to this survey will help with identifying barriers that students have with continuing their education.

This survey is brief and should take only 20 minutes to complete. To participate, you may click the link below or copy and paste the link into your browser of choice. The first page of the survey will contain more details about the survey and the informed consent so that you may determine if you would like to participate. Please complete your survey by 02-19-2022.

<SURVEY_LINK>

Your participation in this survey is voluntary, and responses will be anonymous. No personal information will be linked to any of the reports associated with this survey. The Arkansas Tech University Institutional Review Board has approved this survey. Should you have any comments or questions regarding this survey, please contact me at rsnyder2@atu.edu or [REDACTED] or Dr. Shelly Randall, PhD, RN, Research Advisor at srandall@atu.edu .

Thank you for your time and cooperation. Your input is highly valued!

Blaine Snyder, BSN, RN

Appendix C

Online Consent & QuestionPro Survey

Logic Settings ⋮

Hello:

You are invited to participate in our survey identifying the factors that might hinder a practical nursing student or recent graduate from becoming an RN. In this survey, approximately 120 people will be asked to complete a one-time survey that asks questions about demographics, support services, and factors influencing your ability to become an RN. It will take approximately 15 minutes to complete the questionnaire.

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. This survey is not associated with any course or grades in the Practical Nursing program. Choosing to not participate will not hinder progress within the program in any way. There are no repercussions if you choose not to participate. If you feel uncomfortable answering any questions, you can choose not to respond or withdraw from the survey at any point. It is very important for us to learn your opinions.

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential. There is no compensation or reward for participating in this survey. There is no outside funding for this survey.

If you have questions at any time about the survey or the procedures, you may contact Blaine Snyder at rsnyder2@atu.edu or at [REDACTED].

Thank you very much for your time and support. By completing the survey you are agreeing to participate in the research. If you agree, please start with the survey now by clicking on the **Continue** button below. If you do not agree, thank you for considering participation. You may exit this page now.

What is your relationship to the Arkansas Tech University - Ozark Campus Practical Nursing Program?

- Current Student
- Recent Graduate
- I do not currently nor have I attended the Arkansas Tech University - Ozark Campus practical nursing program.

Add Question

Page Break

Separator

What is your highest level of education **in nursing**?

- Certified Nursing Assistant
- Medication Assistant – Certified
- Current enrollment in practical nursing program
- Completed practical nursing program, not licensed or temporary license only
- Licensed Practical Nurse
- Licensed Practical Nurse, currently enrolled in pre-requisites for a registered nursing program
- Licensed Practical Nurse, currently enrolled in a registered nursing program
- Licensed Practical Nurse, completed a registered nursing program, not licensed as RN
- Registered Nurse

With what gender do you identify?

- Female
- Male
- Other
- Choose not to respond

Add Question

Page Break

Separator

What is your current relationship status?

- Single, no children
- Single, children
- Married, no children
- Married, children
- Cohabiting, no children
- Cohabiting, children
- Choose not to respond

What is your current age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 64 or above
- Choose not to respond

Add Question

Page Break

Separator

To what race do you most closely identify?

- Native American or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Pacific Islander
- White
- More than one race
- Choose not to respond

Which ethnicity best describes you?

- Hispanic
- Non-Hispanic
- Choose not to respond

Add Question

Remove Page Break

Separator

What best describes your employment status?

- Full-time employment
- Part-time employment
- Unemployed

Add Question

Page Break

Separator

What best describes your **highest completed level** of education?

- High School Diploma
- GED
- Technical Certificate
- Associate's Degree
- Baccalaureate Degree
- Other

What best describe the area where you reside?

- Town or city with more than 35,000 residents
- Town or city with 15,000 to 35,000 residents
- Town or city with 5,000 to 15,000 residents
- Town with less than 5,000 residents
- Rural, not within the city limits

Add Question

Remove Page Break

Separator

Validation Logic Settings

How likely are you to apply to participate in a registered nursing program in the next two years?

- I intend to apply.
- I would like to apply, but it is not certain that I will.
- I might apply, but I am not sure if I am interested.
- I am not likely to apply.
- I have no intentions to apply.
- I am currently enrolled in a registered nursing program

How likely are you to apply to participate in a registered nursing program in the next five years?

- I intend to apply.
- I would like to apply, but it is not certain that I will.
- I might apply, but I am not sure if I am interested.
- I am not likely to apply.
- I have no intentions to apply.
- I am currently enrolled in a registered nursing program.

Add Question

Remove Page Break

Separator

Which of the following socioeconomic concerns have affected you in the last year that **are not due to changes related to COVID-19**?

Select all that apply.

- Lack of consistent access to enough food
- Lack of consistent shelter other than vehicle
- Lack of consistent shelter including vehicle
- Lack of consistent transportation
- Lack of quality internet access
- Lack of running water at primary residence
- Lack of electricity at primary residence
- Lack of adequate childcare during times needed
- Use of government support systems for food or financial assistance
- Use of community supports for food or financial assistance
- I have not experienced any of these concerns unrelated to COVID-19

Which of the following socioeconomic concerns have affected you in the last year **due to changes caused by COVID-19?**

Select all that apply.

- Lack of consistent access to enough food
- Lack of consistent shelter other than vehicle
- Lack of consistent shelter including vehicle
- Lack of consistent transportation
- Lack of quality internet access
- Lack of running water at primary residence
- Lack of electricity at primary residence
- Lack of adequate childcare during times needed
- Use of government support systems for food or financial assistance
- Use of community supports for food or financial assistance
- I have not experienced any of these concerns due to changes caused by COVID-19

Which of the following student support systems did you utilize while enrolled as a student in the practical nursing program at Arkansas Tech University – Ozark Campus?
Select all that apply.

- Pell Grants
- Student Loans
- AR Future Grant
- Arkansas Academic Challenge Scholarship
- Private scholarships
- Career Pathways Initiative
- CCAMPIS Grant
- Trio Student Support Services
- Arkansas Tech University – Ozark Campus scholarship (any campus scholarship)
- Single Parent Scholarship
- Employer scholarship or educational assistance
- GI Bill
- Non-work study student employment
- CARES Act
- Arkansas Workforce Challenge Scholarship
- Other financial aid or scholarship not listed above
- Arkansas Tech University – Ozark Campus Green and Gold food pantry
- Student Success Center
- ADA accommodations
- Open access computer labs
- Library

When considering progression to a registered nursing program, which of the following are concerns that might keep you from attempting progression?

Select all that apply

- Lack of financial aid or ability to pay
- Scheduling conflicts with work
- Maintaining work/life balance while in school
- Lack of childcare
- Having to re-take courses, or take courses similar to ones already taken as pre-requisites
- Length of time to complete program
- Not being able to stay employed full-time (including benefit loss as a result)
- Pay increase not significant enough to make worth the financial and time effort
- Increased student debt
- Not comfortable with the technology used
- Lack of quality internet access to support education
- Other household concerns
- Lack of program fitting needs
- I have no concerns with attempting to progress to registered nursing
- I do not desire to progress to registered nursing

Add Question

Remove Page Break

Separator

Do you have any concerns that might keep you from academic progression that have not been addressed in this survey? If so, please describe below.

Multiple Row Answer text

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.....
.....