



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

## Teaching and Learning in Nursing

journal homepage: [www.journals.elsevier.com/teaching-and-learning-in-nursing](http://www.journals.elsevier.com/teaching-and-learning-in-nursing)

## Research

## The voices of online RN-BS students during the COVID-19 pandemic

Christine Salvucci, DNP, RN, CNE<sup>1\*</sup>, Jo Anne Foley, DNP, RN, CNE<sup>2</sup><sup>1</sup> Manning College of Nursing & Health Sciences, University of Massachusetts, Boston, MA, USA<sup>2</sup> Laboure College, Milton MA, Milton, MA, USA

## ARTICLE INFO

## Article History:

Accepted 25 September 2022

## Keywords:

Challenges  
COVID-19  
Education  
Nursing students

## ABSTRACT

The need for associate degree nurses to advance their education to replace the nursing workforce will be critical in the next decade. This qualitative descriptive study explored the experiences and challenges of nurses completing their educational journey in a RN-BS program during the COVID-19 pandemic. Four focus group interviews were conducted with a total of 20 RN-BS students. Data analysis revealed four themes; pulled in many directions, faculty understanding, resilience and opening doors. The COVID-19 pandemic and the current nursing shortage presented increased challenges not experienced before for these nurses pursuing a bachelor's degree. The importance of faculty support and a caring presence during this time was a significant factor for student success.

© 2022 Organization for Associate Degree Nursing. Published by Elsevier Inc. All rights reserved.

## Background

Many in the nursing workforce continued their educational journey amidst a global pandemic as the predicted nursing shortage intensified. Little is understood about these nurse's experiences as they continued their education during these turbulent times. The [International Council of Nurses \(2021\)](#) found that 54% of post-registration education was disrupted during the COVID-19 pandemic. Much of the nursing literature focuses on the effects the COVID-19 pandemic had on the traditional undergraduate student revealing difficulty with concentrating and learning during the pandemic and highlighting the importance of the faculty showing humanity during this time ([Lovric, Farcic, Miksic, & Vcev, 2020](#)). With the onset of the pandemic more complex nursing care has been needed. The [Institute of Medicine \(2011\)](#) advocates meeting the more complex needs of patients requiring nurses to achieve higher levels of education both on entry into the profession and throughout their careers. This is further stressed in the Future of Nursing 2020-2030 report indicating an increased need for diversity of the nursing workforce along with improvements in education related to social determinants of health ([National Academies of Sciences, Engineering, and Medicine, 2021](#)). Furthermore, other safety organizations such as the Centers of Medicare and Medicaid Services (CSM), Joint Commission, and the Agency of Healthcare Research and Quality (AHRQ) seek to improve the

safety and standards of patient care on a national level by promoting a highly qualified nursing workforce. Many associate degree nurses face financial barriers when continuing their education onto a bachelor's program. The Future of Nursing 2020-2030 report highlights the importance of supporting educational mobility with the need to design payment mechanisms for the nursing workforce to improve population health and to advance health equity ([National Academies of Sciences, Engineering, and Medicine, 2021](#)). The importance of associate degree nurses obtaining a bachelor's degree will become even more critical in providing a workforce that is well-prepared to meet the healthcare demands of the future.

The nursing workforce has been experiencing shortages with the median age of registered nurses (RN's) being 52 and more than one-fifth of RN's indicating an intent to retire over the next five years ([American Nurses Association, 2022](#)). [Raso, Fitzpatrick, and Masick \(2021\)](#) found that eleven percent of nurses planned to leave their position and 20% were undecided about staying in nursing. Several issues contributing to the workforce shortage have been identified in the literature ([American Association of Colleges of Nursing \[AACN\], 2020; Haddad et al., 2022](#)). The COVID-19 pandemic has further exacerbated the nursing shortage and in the next 10 years, one in six nurses in the world is expected to retire. 4.7 million new nurses will be needed to replace them ([Machitidze, 2022](#)). Baby boomers are retiring from the workforce and are entering the age of increased need for health services. In 2017, the number of US residents aged 65 and over was approximately 82 million, resulting in the need for more geriatric care and more care for individuals with chronic diseases ([AACN, 2020, p.2-3](#)). Burnout is another reason nurses are leaving the workforce. A study done by [Shah et al. \(2021\)](#) found 31.5% of nurses cited burnout as the reason for leaving their job in 2017-2018. This is compared to 17% in 2007, a difference of 14.5% more nurses

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

\*Correspondence author at: Clinical Associate Professor, Program Director, University of Massachusetts Boston, Manning College of Nursing & Health Science, 100 Morrissey Blvd, Boston MA 02125, USA. Tel.: 617 287 7547.

E-mail address: [Christine.salvucci@umb.edu](mailto:Christine.salvucci@umb.edu) (C. Salvucci).

<https://doi.org/10.1016/j.teln.2022.09.010>

1557-3087/© 2022 Organization for Associate Degree Nursing. Published by Elsevier Inc. All rights reserved.

Please cite this article as: C. Salvucci and J.A. Foley, The voices of online RN-BS students during the COVID-19 pandemic, *Teaching and Learning in Nursing* (2022), <https://doi.org/10.1016/j.teln.2022.09.010>

leaving their job due to burnout. Nurse burnout has been correlated with increased workloads, lack of support from leadership, and lack of collaboration among nurses and physicians (Shah et al., 2021). Burnout was also more associated with working in a hospital setting and the number of hours worked (Shah et al., 2021). The nursing shortage has been complicated by the COVID-19 pandemic resulting in staffing issues and higher patient nurse to patient ratios and burnout (Shah et al., 2021).

The nursing workforce shortage is compounded by the issues facing academia. The American Association of Colleges of Nursing (AACN) found that U.S. nursing schools turned away 76,140 qualified applicants from entry level baccalaureate programs and 1,055 from RN-BS programs due to lack of faculty, clinical sites, classroom space and clinical preceptors (AACN, 2022). Much of the nursing workforce continues to be educated at the associate degree level. The 2020 National Nursing Workforce Survey found 37.7% of the nursing workforce to hold an Associate Degree when first licensed (Smiley et al., 2021). Many of these associate degree nurses continue their education. According to the AACN 2021 Annual Survey; 118,911 students were enrolled in a RN-baccalaureate program. Enrollment in RN to baccalaureate programs declined by 9.6% in 2021 for the third consecutive year (AACN, 2022). Nurses with a baccalaureate-level education have demonstrated better patient outcomes, decreased mortality rates, reduced readmission rates and shorter length of hospital stay (Lasater et al., 2021). The RN-baccalaureate programs are one way nursing can strengthen the workforce, as this provides an educational pathway for the associate degree nurses to advance their education to the next level. It is critical for faculty to understand the challenges faced by students in a RN-BS program so faculty can best support these students for successful completion of their baccalaureate education.

The literature of RN-BS students has consistently shown these students are typically older, work full time and juggle family responsibilities (Nikolaidou, Bryer, Peterson-Graziose, & Raman, 2019). Working extra hours and the number of hours per week RN-BS students work has been shown to be a barrier in program completion and retention (Nikolaidou et al., 2019). Reasons for these nurses to return to school included requirements for job, personal reasons, and financial stability (Iheduru- Anderson, 2021). Past literature has documented the challenge of completing a program due to family and work obligations (Perfetto, 2015). Factors that contribute to a delay or withdrawal from an RN-BS program included the inability to navigate outside responsibilities of work and school, poor study habits, technology challenges and poor time management (Iheduru- Anderson, 2021; Sabio et al., 2020).

The literature related to the RN-BS educational experience has shown these students least value group work, discussion boards and lack of access to instructors (Hensley et al., 2020). Hensley et al. (2020) stressed the importance of faculty providing a variety of ways to keep students engaged online, as students lose interest in doing the same type of assignment repeatedly. Hensley et al. (2020) acknowledged the importance of faculty being flexible and caring to RN-BS students, as these students are many times balancing the obligations of work and family while continuing their education. This research was carried out because there was a noticed gap in the literature about how registered nurses perceive their experience of working and completing their educational journey in a RN-BS program during the COVID-19 crisis. The importance of understanding the challenges nurses face while continuing their education is key to supporting these nurses and promoting a stronger workforce in these critical times. The purpose of this research study was to understand the lived experiences and perceptions of nurses completing their education in an RN-BS program during times of uncharted healthcare challenges related to the COVID-19 pandemic.

## Methods

### *Design & ethical considerations*

A descriptive qualitative design was utilized for this study to identify the themes that emerged from the narrative content (Polit & Beck, 2018) and for examining healthcare and nursing-related phenomena (Kim, Sefcik, & Bradway, 2017). Permission to conduct this study as exempt was granted by the University Institutional Review Board (IRB) to review data that was collected in December 2020. An email containing detailed information about participation in the focus interview was sent to students four weeks before the semester ended. These focus interviews are carried out each semester for students completing the RN-BS program as a component of program evaluation. Participation was voluntary and participation in the focus group interview was considered consent and no compensation was provided.

### *Research team and reflexivity*

The primary researcher is an experienced nurse educator doctorally prepared who has prior experience and training in qualitative research. The researcher was in an administrative position at the university at the time of the focus interviews. The research assistant conducted and moderated the focus interviews and has prior experience and training in focus group interviews. The research assistant conducted the focus interviews and enabled the participants to be open and honest about the students' academic experience since the researcher had an administrative position at the time of the interviews. Interpretations of data for codes and themes occurred with another nurse educator who has experience and has published qualitative research.

### *Sample and setting*

A convenience sample of online RN-BS nursing students completing their last semester at a large public university in New England was utilized for this study. Recruitment began by emailing 35 students completing the RN-BS program and asking for participation in a focus interview. Participants interested in participating then emailed the research assistant to express interest in the focus interviews. Participants wishing to participate in the focus interview were then scheduled for a mutually convenient focus group interview which resulted in four groups. Interviews were conducted in December 2020 via the Zoom platform and analyzed for this study. A total of 20 students participated in the four focus interviews with 19 of the participants identifying as female (95%) and one male (5%), all students resided in the New England area. All participants were completing the RN-BS program in December 2020 and in their last two weeks of the semester.

### *Data collection*

The research assistant conducted four focus interviews during the last two weeks of the semester in December 2020, with each interview taking approximately one hour to conduct via Zoom. All interviews were recorded using the Zoom platform with participants being notified of the recording at the beginning of each interview. Student anonymity was maintained during the interview process as no names appeared on the Zoom profile and students were given the option to turn their video off. All recordings were transcribed fully verbatim by the research assistant and then reviewed for accuracy against the Zoom recording multiple times by the researcher. The transcripts contained no identifying information to maintain

confidentiality. All transcripts and Zoom recordings are kept secured on the University OneDrive.

A focus interview guide of semi-structured questions was utilized for the four focus groups to stimulate student perceptions of their educational experience. Students were asked open-ended questions which included “What did you find most enjoyable about your education towards your bachelor’s degree?” “What did you find least enjoyable about your education towards your bachelor’s degree?” “Completing your bachelor’s degree has meant what to you?” How do you think the bachelor’s degree has influenced your nursing practice as a registered nurse?” “And is there anything else you would like to say?” This question allowed participants a chance to offer any additional information. Member checking was carried out by the research assistant by probing further during the interview to ensure that the participants’ meanings were understood by asking “Can you tell me more or can you explain this to me?” After the fourth focus group, the researcher determined that data saturation was achieved as no new information was obtained during the interview with a total of 20 participants.

### Data analysis

Qualitative analysis was used to analyze the data for themes using thematic analysis using the six phases outlined by [Nowell, Norris, White, and Moules \(2017\)](#). 1. Familiarize yourself with the data (the researcher had prolonged engagement with the data, the Zoom recordings were transcribed, and listened to multiple times, reading and rereading of the transcripts). 2. Generating initial codes (coding was conducted by the researcher using the ATLAS® program and 38 codes were identified). 3. Searching for themes (the researcher classified codes using the ATLAS® program with four themes emerging from the 20 interviews). 4. Reviewing themes (reviewed coded data for each theme and how codes fit with the theme). 5. Defining and naming themes (detailed analysis of each theme conducted). 6. Producing report (created a story about the identified themes).

### Techniques to enhance trustworthiness

Trustworthiness of this research was based upon [Lincoln and Guba’s \(1985\)](#) criteria as the researcher had prolonged engagement with the data, cross-checking of data, and interpretations with another nurse educator who has experience and is published with qualitative research. The researcher established an audit trail and achieved dependability by having two members of the research team transcribe and validate the material. The researcher met biweekly with another nurse educator to reach consensus on the codes and themes. Data saturation was reached with the four interviews demonstrating transferability of the data. Direct quotes are used to validate the identified categories by the researcher and transferability of the data.

### Findings

Four themes emerged from the data analysis as it related to describing the RN-BS students’ academic experience: Pulled in Many Directions, Faculty Understanding, Resilience, and Opening Doors.

#### *Pulled in many directions*

The participants experienced increased stress and challenges completing their education. Participants found school in addition to the COVID-19 pandemic exhausting, challenging, and hectic. Participants described being overwhelmed and struggling to complete schoolwork along with working longer hours and taking on extra shifts. Time management was key in balancing work, school and

family previously but now became critical due to the participants changing work schedules, making it impossible to plan. The participants that had children found the balancing of work and school to be extremely challenging, as many were trying to do their own learning and their children’s online learning. Student comments included:

*“I least enjoyed the outside forces encroaching on my studies. Finding a quiet place to do [school] work, it was super busy at work and trying to get assignments done that were due.”*

*“Been a process during COVID with school and online learning [and] with kids also doing online learning.”*

*“Struggling to complete assignments, never had this issue before. Professors were encouraging and understanding. Needed to pick up extra shifts at work so assignment [was] late and [the] professor [was] OK with this. Professors wanted us to succeed. Went above and beyond.”*

*Due to COVID the workload was more difficult and getting schoolwork done was harder. I am glad to be done. Completing school was difficult.”*

#### *Faculty understanding*

Participants found the support they received from faculty during the COVID-19 pandemic got them through a tough time and kept them motivated to continue in the program. Knowing the faculty identified to what the participants were going through was important to the participants. In the interviews the participants found the faculty to be compassionate and understanding. They were also appreciative of the faculty willing to adjust assignment completion and submission times. Students verbalized they appreciated that faculty responded back quickly and opened weekly folders ahead of time instead of week by week. This allowed students to work on multiple weeks of content when they had time. The importance of the faculty having empathy, understanding, and wanting the participants to succeed was highlighted by the participants.

*“Faculty understood what everyone was going through, [we are] all in the same boat.”*

*“This year [has] been hard but coursework was manageable. Professors attentive, respond quickly, accommodating. Flexible to work with us [and] expectations up front.”*

*“Professors amazing, they know if you were feeling stressed or anxious. Professors drive you through, helpful to do this.”*

*“During COVID faculty was unbelievably helpful. Faculty was so supportive and awesome.”*

#### *Resilience*

The participants acknowledged the ability to overcome hardships and adjust to the demands of school and work during a pandemic. The participants expressed they were able to rise above and had a great sense of accomplishment in finishing the program. The participants were glad they were in an online program, they verbalized having the educational experience online made it possible to be successful. The participants clearly verbalized never losing hope and stated a great sense of pride in completing their educational experience during a time of crisis in healthcare.

*“Blessed to be in an online program because [I] have had a complex journey.”*

*“I am proud of myself for sticking it out.”*

*“Completing my bachelor’s degree is a huge accomplishment for me with COVID. [I] kept going on, wanting to get it done.” “I am proud of myself for sticking it out.”*

*“It was necessary and an accomplishment [to finish my bachelor’s degree and] a lot of hard work.*

*Light at the end of the tunnel, always [have] hope.”*

### Opening doors

The participants completing their educational journey voiced they will now have more career opportunities, with many expressing they will seek positions in acute care settings. The ability to move up in their career and wanting to continue their education with the goal of becoming a nurse practitioner was voiced by some of the participants.

*“I have more career opportunities and I can continue my education now that I have mastered writing.”*

*“With my degree it will open up more choices in my career and I am excited to be finished.”*

*“Having my degree means a lot. It makes me feel valued and it will open doors. I can now start applying to hospitals and to nurse practitioner program.”*

*“The bachelor’s degree is one step closer to master or DNP.”*

*“[Having my bachelor’s degree] means I can advance my career into more leadership roles.”*

### Four focus groups findings

Each of the four focus group summaries are based on consensus of each focus group. To note, evaluation of body language was limited to facial expressions due to the interviews being conducted via Zoom with participants having the option to turn the camera off during the interview.

*Group 1:* Consisted of two participants with the camera off for both during the interview. The group consensus obtained from the interview included challenging time, supportive faculty, clear expectations, COVID and its effect on school, time management and more opportunities.

*Group 2:* Consisted of five participants with camera on for four participants and off for one participant. Facial expressions noted were the participants looking at the camera and appearing to be listening to each of the participant responses, and being very engaged and respectful of each other speaking. Head shaking was noted by one of the participants throughout the interview as in agreement with what was being said by the other participants. This group was very articulate when answering the questions giving more detailed responses regarding their experience during the interview. The four participants with the camera on appeared to be in a home setting. The four participants with the camera on engaged for the entire interview and maintained facial contact with the camera. The group consensus obtained from the interview included the effect COVID had on work and school, supportive and flexible faculty, time management, and sense of pride and accomplishment.

*Group 3:* Consisted of five participants with the camera on for four participants and off for one participant. The four participants appeared to be in a home environment and were noted to be actively listening to peers during the interview. Participants maintained eye contact with the camera and appeared to be actively listening to peer

responses during the interview. Participants verbalized enjoying the meeting and appreciated being able to verbalize their educational experience. The group consensus obtained from the interview included the effects of COVID on school and work, flexible faculty, a complex and challenging journey, and a sense of pride in completing the program.

*Group 4:* Was the largest group and consisted of eight participants. All participants had their camera off for the interview, so no body language was observed for this group. The group consensus from the interview included the effects of COVID on school, time management, faculty being flexible, confidence and feeling accomplished. This group had more discussion on the effects of COVID and school on their confidence than the other three groups.

### Discussion

This study found that participants experienced many challenges with the COVID-19 healthcare crisis, especially with balancing workload, time management and increasing stresses in the work environment. This study revealed that the participants were able to successfully complete their program of study when faced with working longer hours and extra shifts, as [Nikolaidou et al. \(2019\)](#), this found that working extra shifts was a barrier to program completion. These participants were able to successfully complete a RN-BS program even with working longer and extra hours due to the healthcare crisis. This contradicts the finding by [Nikolaidou et al. \(2019\)](#), this study found participants experienced role stress; a similar finding in [Wallace et al. \(2021\)](#). Nursing faculty cannot reduce all sources of stress, but the importance of faculty emanating a caring presence during this time can play a significant role in student success ([Henderson, Sewell, & Wei, 2020](#)). In this study, faculty responded back to student emails as quickly as possible, including weekends and evenings. Faculty understood students were working longer hours and more shifts and may not be able to check email again for a period of time. Typically, faculty follow guidelines of responding to students’ emails within twenty-four hours, as this has been shown to be best practices in the literature ([Authement et al., 2020](#)).

Time management was best supported by the faculty with opening weekly session weeks in advance. Faculty teaching online typically open weekly folders one or two weeks ahead of the start date, as this is defined as best practices for online learning ([Kennedy, 2017](#)). The literature supports faculty being flexible with due dates for RN-BS students because of work and family responsibilities ([Hensley et al., 2020](#)). This study reinforced the significance of faculty allowing for increased flexibility with due dates. It is advised that faculty and students work together closely to define new due dates. It should be noted that this may result in extra work on the faculty, as students will be submitting assignments and papers on various dates throughout the semester.

Participants were looking for more ways to connect both formally and informally with faculty and peers. To promote more informal ways of connecting students to each other, programs can hold informal Zoom sessions and call it “coffee hour.” This program held two informal coffee hours where faculty, program director and students met online via Zoom that allowed the program to check in with the students. This time was unstructured with a goal of checking in with students and allowing students a time to connect with each other. Students found it helpful that faculty offered three to four synchronized class sessions during the semester to better enhance connection between the faculty and students. [Peterson, Beymer, and Putnam \(2018\)](#), found that synchronous sessions provided students with a sense of belonging. These synchronized sessions were not required and were recorded for students that were unable to attend so they could watch later.

The importance of nurses needing to maintain resilience is critical in maintaining a healthy nursing workforce (Jo et al., 2021). Nurses can strengthen their personal resilience in handling life stressors more effectively with support and mentoring (Henshall, Davey, & Jackson, 2020). Nursing faculty can stress the importance of self-care, as these are nurses caring for others. Encouraging proper nutrition, sleep, and reflection/mediation is important to achieve life balance and a healthy self. As a result of the COVID-19 pandemic, leadership has realized the need to focus on promoting resiliency in the workforce to retain nurses (Foster et al., 2019). The importance of self-reflection and self-critique was found to enhance the resilience of nurses (Henshall et al., 2020). These tools can be incorporated into the nursing curriculums and in clinical practice to build resilience.

Most of the participants in the study commented that completing their bachelor's degree will open new opportunities for them. The door is now open for them to seek new job opportunities with many seeking acute care settings, going onto graduate school and financial stability. The importance of obtaining a bachelor's degree is critical as the nursing workforce is shrinking. Bachelor-prepared nurses have a greater understanding of the scope of practice to include cultural, economic, political, and social issues that affect patient care delivery in the healthcare system (American Association of Colleges of Nursing, 2019). Ihduru-Anderson (2021), outlines the importance of financial stability and job security for RN-BS students completing their degree. The participants of this study also commented that they now feel a sense of confidence, as well as feeling more valued, more responsible and more community engagement. This questions the feelings of self-worth these nurses had as associate degree nurses.

### Limitations

This study was limited by the sample of students in one RN-BS program and findings should not be generalized to all RN-BS students. A convenience sample of RN-BS in their final semester was utilized for this study, thus this sample may not be representative of RN-BS students. A larger sample at multiple RN-BS nursing programs may have produced additional findings. The focus interviews were conducted via Zoom, this limited the ability to observe body language and some participants chose to turn their camera off during the interview. Themes were based on verbatim transcripts from the participants. A limitation of focus groups is that the participants may be biased in their responses or echo the same information heard from other participants in the group.

### Future research and conclusion

The results of this study can be used to understand experiences of nurses pursuing education during times of unrest in healthcare. Future research can focus on incentives that are offered to associate degree graduates to pursue a bachelor's degree since the need for bachelors prepared nurses is going to become urgent in the near future. It was interesting to note the sense of value that these nurses now feel and future research to explore the perceptions of associate degree nurses may be helpful in understanding this area more deeply. This study found that participants experienced many challenges especially with balancing workload and time management during the COVID pandemic. Participants' experiences emphasized time management as a necessary component for success. Social support is a significant component in resilience, as the participants were working in the frontlines during a pandemic. It is imperative that faculty develop nurturing and supportive professional relationships and listen to make students feel respected. Faculty should validate students' feelings by being empathic, understanding and reminding students they are not alone. Resilience building needs to be incorporated into nursing education especially in times of crisis.

Fostering resilience of the nursing workforce is recommended for further research as the need to retain nurses is of the utmost importance in the ever-growing nursing shortage. Faculty should remain hopeful, optimistic and remind students to focus on what they are grateful for, as gratefulness was echoed by the participants in this study highlighting the importance of recognizing the positive aspects in life amidst a pandemic.

### References

- American Association of College of Nursing (2020). Fact sheet: Nursing shortage. Retrieved March 10, 2022, from <https://www.aacnnursing.org/Portals/42/News/Factsheets/Nursing-Shortage-Factsheet.pdf>.
- American Association of College of Nursing (2021). Annual survey. Retrieved March 10, 2022, from <https://www.aacnnursing.org/News-Information/Research-Data-Center/Annual-Surveys>
- American Association of Colleges of Nursing (2019). Fact sheet: The impact of education on nursing practice: American Association of Colleges of Nursing; Retrieved March 10, 2022, from <https://www.aacnnursing.org/News-Information/Factsheets/Impact-of-Education>
- American Association of Colleges of Nursing (2022). *Nursing schools see enrollment increases in entry-level programs, signaling strong interest in nursing careers* [Press Release]. Retrieved March 10, 2022, from <https://www.aacnnursing.org/News-Information/Press-Releases/View/ArticleId/25183/Nursing-Schools-See-Enrollment-Increases-in-Entry-Level-Programs>
- American Nurses Association. (n.d.) *Nurse staffing*. Retrieved March 10, 2022, from <https://www.nursingworld.org/practice-policy/nurse-staffing/>
- Authement, R. S., & Dormire, S. L. (2020). *Introduction to the online nursing education best practices guide: 6SAGE open nursing 2377960820937290*. doi:10.1177/2377960820937290.
- Foster, K., Roche, M., Delgado, C., Cuzzillo, C., Giandinoto, J. A., & Furness, T. (2019). Resilience and mental health nursing: An integrative review of international literature. *International Journal of Mental Health Nursing*, 28(1), 71–85. doi:10.1111/inm.12548.
- Haddad, L. M., Annamaraju, P., & Toney- Butler, T. J. (2022). *Nursing Shortage*. StatPearls Treasure Island Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK493175>.
- Henderson, D., Sewell, K. A., & Wei, H. (2020). The impacts of faculty caring on nursing students' intent to graduate: A systematic literature review. *International Journal of Nursing Sciences*, 7(1), 105–111. doi:10.1016/j.ijnss.2019.12.009.
- Henshall, C., Davey, Z., & Jackson, D. (2020). The implementation and evaluation of a resilience enhancement programme for nurses working in the forensic setting. *International Journal of Mental Health Nursing*, 29(3), 508–520. doi:10.1111/inm.12689.
- Hensley, A., Wilson, J. L., Culp-Roche, A., Hampton, D., Hardin-Fanning, F., Cheshire, M., & Wiggins, A. T. (2020). Characteristics of RN to BSN students in online programs. *Nurse Education Today*, 89. doi:10.1016/j.nedt.2020.104399 104399–104399.
- Ihduru-Anderson, K. (2021). Students' perspectives of factors related to delayed completion of online RN-BSN program. *BMC Nursing*, 20(53), 1–13. doi:10.1186/s12912-021-00574-7.
- Institute of Medicine. (2011). *Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing. The Future of Nursing: Leading change, advancing health*. Washington: National Academies Press. Retrieved March 10, 2022, from <https://www.ncbi.nlm.nih.gov/books/NBK209881/>.
- International Council of Nurses. (2021). *Nursing education and the emerging nursing workforce in COVID-19 pandemic* [Policy brief]. Retrieved March 10, 2022, from [https://www.icn.ch/system/files/2021-07/ICN%20Policy%20Brief\\_Nursing%20Education.pdf](https://www.icn.ch/system/files/2021-07/ICN%20Policy%20Brief_Nursing%20Education.pdf)
- Jo, S., Kurt, S., Bennett, J. A., Mayer, K., Pituch, K. A., Simpson, V., Skibiski, J., Takagi, E., Karaaslan, M. M., Ozluk, B., & Reifsnider, E. (2021). Nurses' resilience in the face of coronavirus (COVID-19): An international view. *Nursing & Health Sciences*, 23(3), 646–657. doi:10.1111/nhs.12863.
- Kennedy, S. (2017). *Designing and teaching online courses in nursing*. Springer Publishing Company.
- Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of qualitative descriptive studies: A systematic review. *Research in Nursing & Health*, 40(1), 23–42. doi:10.1002/nur.21768.
- Lasater, K. B., Sloane, D. M., McHugh, M. D., Porat-Dahlerbruch, J., & Aiken, L. H. (2021). Changes in proportion of bachelor's nurses associated with improvements in patient outcomes. *Research in Nursing & Health*, 44(5), 787–795. doi:10.1002/nur.22163.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Lovric, R., Farcic, N., Miksic, S., & Vcev, A. (2020). Studying during the COVID-19 pandemic: A qualitative inductive content analysis of nursing students' perceptions and experiences. *Education Sciences*, 10(7), 188. doi:10.3390/educsci10070188.
- Machitidze, M. (2022). Impact of the nurses education and shortage on the patient care outcomes-literature review. *American Journal of Biomedical Science & Research*, 15(4), 441–443. doi:10.34297/AJBSR.2022.15.002135.
- National Academies of Sciences, Engineering, and Medicine. (2021). *The future of nursing 2020–2030: Charting a path to achieve health equity*. Washington, DC: The National Academies Press. doi:10.17226/25982.

- Nikolaidou, M., Bryer, J., Peterson-Graziose, V., & Raman, J. (2019). Variables that influence retention in registered nurse-bachelor of science students: A multisite longitudinal study. *Teaching and Learning in Nursing, 14*(4), 303–308. doi:[10.1016/j.teln.2019.07.002](https://doi.org/10.1016/j.teln.2019.07.002).
- Nowell, S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*(1), 1–13. doi:[10.1177/1609406917733847](https://doi.org/10.1177/1609406917733847).
- Perfetto, L. (2015). Facilitating educational advancement of RNs to the baccalaureate: What are they telling us? *Nursing Education Perspectives, 36*(1), 34–41. doi:[10.5480/13-1161.1](https://doi.org/10.5480/13-1161.1).
- Peterson, A. T., Beymer, P. N., & Putnam, R. T. (2018). Synchronous and asynchronous discussions: Effects on cooperation, belonging, and affect. *Online Learning, 22*(4), 7–25. doi:[10.24059/olj.v22i4.1517](https://doi.org/10.24059/olj.v22i4.1517).
- Polit, & Beck, C. T. (2018). *Essentials of nursing research: Appraising evidence for nursing Practice* (9th ed.). Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Raso, R., Fitzpatrick, J. J., & Masick, K. (2021). Nurse' Intent to leave their position and the profession during the COVID-19 pandemic. *Journal of Nursing Administration, 10*(10), 488–494. doi:[10.1097/NNA.0000000000001052](https://doi.org/10.1097/NNA.0000000000001052).
- Sabio, C., & Petges, N. (2020). Understanding the barriers to BSN education among ADN students: A qualitative study. *Teaching and Learning, 15*(1), 45–52. doi:[10.1016/j.teln.2019.08.007](https://doi.org/10.1016/j.teln.2019.08.007).
- Shah, M., Gandrakota, N., Cimiotti, J. P., Ghose, N., Moore, M., & Ali, M. K. (2021). Prevalence of and factors associated with nurse burnout in the US. *JAMA Network Open, 4*(2) e2036469. doi:[10.1001/jamanetworkopen.2020.36469](https://doi.org/10.1001/jamanetworkopen.2020.36469) –.
- Smiley, R., Ruttinger, C., Oliveira, C., Hudson, L., Allgeyer, R., Reneau, K., Silvestre, J., & Alexander, M. (2021). The 2020 national workforce survey. *Journal of Nursing Regulation, 12*(1). doi:[10.1016/S2155-8256\(21\)00027-2](https://doi.org/10.1016/S2155-8256(21)00027-2).
- Wallace, S., Schuler, M. S., Kaulback, M., Hunt, K., & Baker, M. (2021). Nursing student experiences of remote learning during the COVID-19 pandemic. *Nursing Forum, 56*(3), 612–618. doi:[10.1111/nuf.12568](https://doi.org/10.1111/nuf.12568).