

COVID-19 PANDEMIC CORONAVIRUS



**Impact of COVID-19
Educational Disruptions
on BSN NCLEX
Performance**

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Grant funding

COVID-19

01

Sigma Theta Tau International – Epsilon Sigma at-Large chapter

Funded \$500

02

RCD small grant

Funded \$2,000

03

SNRS Grant

Not funded





The Pandemic

On March 11, 2020, The World Health Organization (WHO) declared COVID-19 a global pandemic (WHO, 2020).

“Pandemic is not a word to use lightly or carelessly. It is a word that, if misused, can cause unreasonable fear, or unjustified acceptance that the fight is over, leading to unnecessary suffering and death” (WHO, 2020, para 7).

Never had a coronavirus caused a pandemic.



In Tennessee - March 12, 2020

Governor Bill Lee declared a state of emergency in response to COVID-19 (TN Office of the Governor, 2020).

The world of academia was turned upside down as face-to-face instruction shifted to online instruction overnight.

Nonclinical courses were suspended to protect students, faculty, and staff.

The American Association of Colleges of Nursing (AACN, 2020) advised student clinical placements and interactions with known or suspected COVID-19 infection patients be limited.



Impact on Students

COVID-19



Campus

Dorms and offices were closed, as students, staff, and faculty were sent home to shelter in place.



Classes

Face to face classes were moved onto virtual platforms using distance teleconferencing technology.



Clinical

Clinical rotations were canceled, and students were given additional assignments and virtual simulations to account for the lost clinical hours.



Result

Mass disruption to educational delivery. The world of academia was turned upside down overnight to meet the needs of the student population.



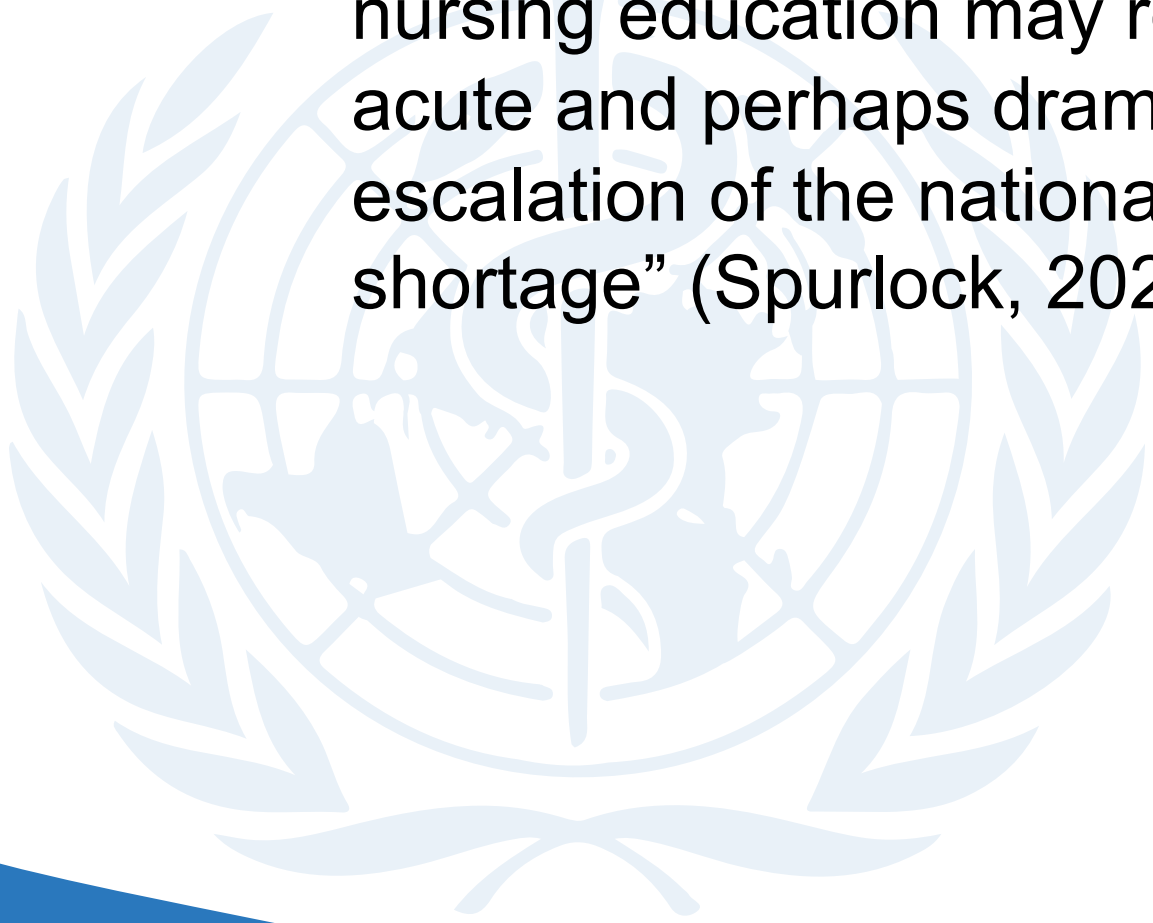
Educational Disruption and Delivery Redesign (EDDR)

Dose is defined as the number of semesters of educational disruption since March 2020

- Emergency remote teaching & learning
- Rapid forced closures
- Crisis
- Digital education
- Consistent access to internet and computers required
- Differences in motivation, preparation, learning



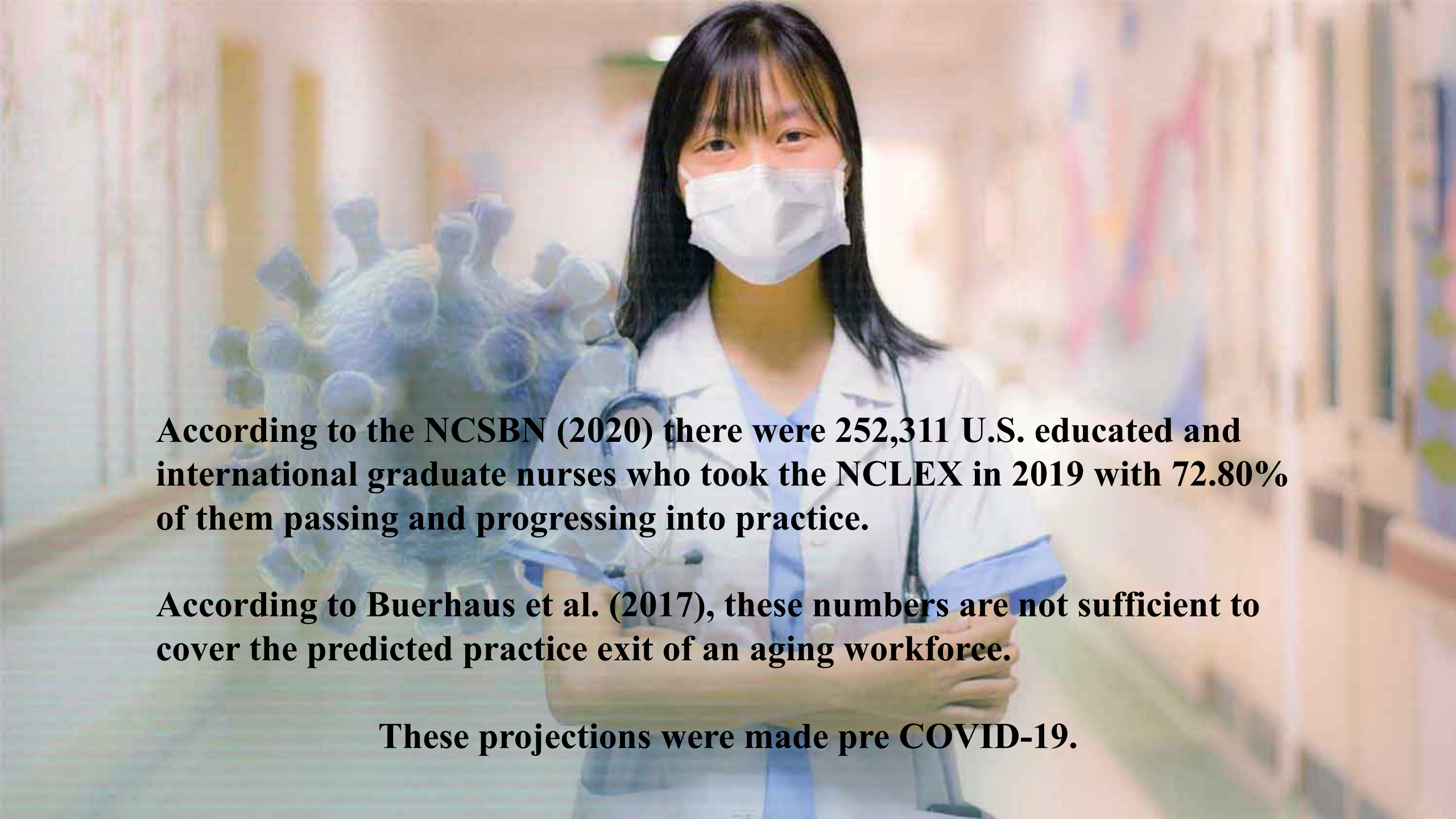
The disruption to the process of nursing education may result in “an acute and perhaps dramatic escalation of the national nursing shortage” (Spurlock, 2020, p. 303).





“ The impact of COVID-19 on prelicensure nursing education has yet to be determined (Spurlock, 2020, p 1824).

”



According to the NCSBN (2020) there were 252,311 U.S. educated and international graduate nurses who took the NCLEX in 2019 with 72.80% of them passing and progressing into practice.

According to Buerhaus et al. (2017), these numbers are not sufficient to cover the predicted practice exit of an aging workforce.

These projections were made pre COVID-19.

Hospitals that employ more baccalaureate prepared nurses and have a lower nurse to patient ratio have an associated decrease in patient mortality (Aiken et al., 2014).





COVID Numbers at a Glance as of April 4, 2021

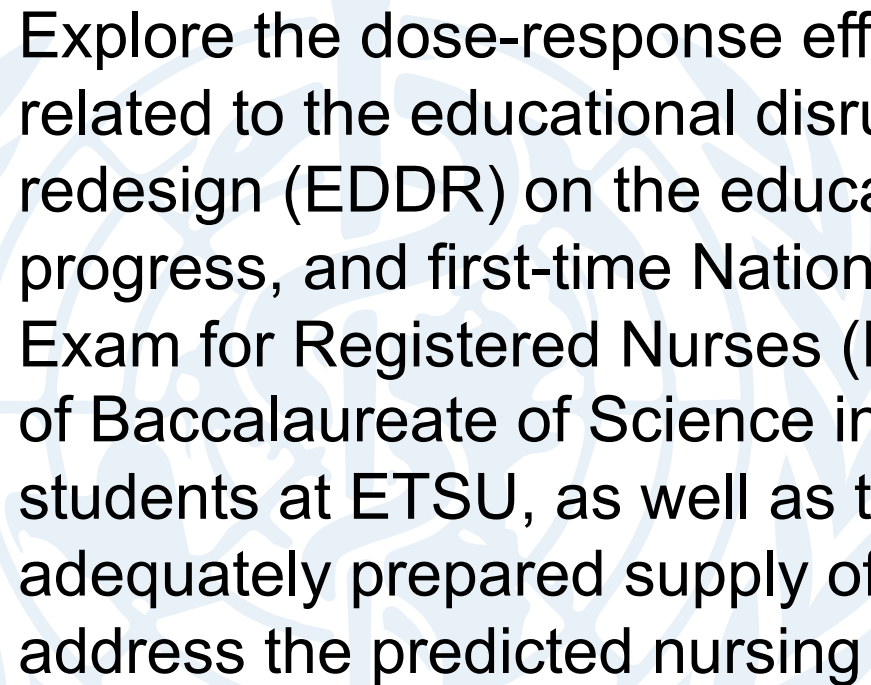
Confirmed cases: 130, 422, 190

Confirmed deaths: 2, 842, 135

Countries affected: 223 (WHO, n.d.)



Purpose



Explore the dose-response effects of COVID-19 related to the educational disruption and delivery redesign (EDDR) on the educational performance, progress, and first-time National Council Licensure Exam for Registered Nurses (NCLEX-RN) pass rates of Baccalaureate of Science in Nursing (BSN) students at ETSU, as well as to ensure that an adequately prepared supply of nurses is prepared to address the predicted nursing shortage.



**Let's stay
at home**

Specific Aims



Describe the dose-response effect of EDDR on prerequisite course performance



Describe the dose-response effect of EDDR on requisite nursing course performance



Describe the dose-response effect of EDDR on first-time NCLEX success rate



Explore the mediating/moderating effects of intrinsic socio-economic variables on overall nursing education performance during the COVID era



Methods

- A descriptive longitudinal design with a dose-response analysis will be used.
- A purposive convenience sample will include the educational records of all traditional BSN students entering the program between Spring 2017 and Fall 2020.
- The primary outcome variable is first-time NCLEX pass rate.
- COVID-related EDDR will be the primary independent variable.

Statistical Analysis



- SPSS will be used for all statistical analyses.
- T-test and chi-square (χ^2) analyses will be used to compare continuous and categorical variables among groups.
- The dose-response effect of EDDR will be examined with linear regression and logistic regression analysis will be conducted to determine the predictive relationship of the independent variable(s) to the dependent variable.
- Total sample size is estimated at 500 students at a 95% power and medium effect size (0.15) with 10 predictors.

PANDEMIC

COVID-19



Results

Forthcoming, as this study has just received IRB approval to begin data collection.

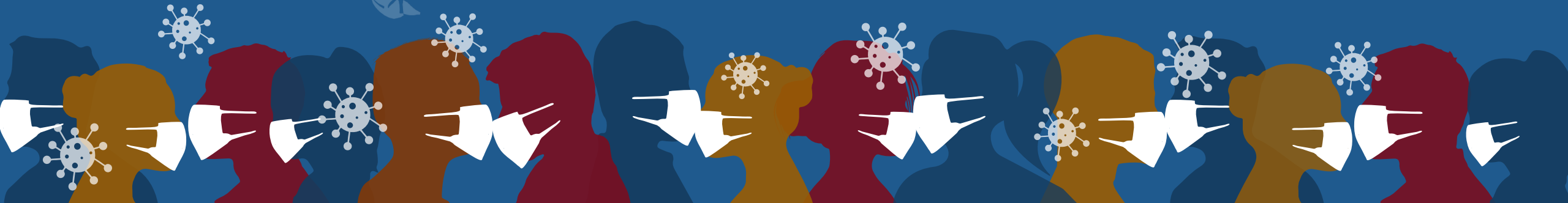
IRB approval has been obtained # c0321.16sw





Exploration of the effects of COVID is critical to preparing students for success in the nursing profession, as well as assuring an adequately prepared pipeline of nurses to address predicted nursing shortages.

COVID-19 has exacerbated the nursing shortage by creating an increased need for bedside nurses, while the number of nurses leaving the profession due to the many physiological and psychological impacts of the pandemic is increasing.



Study Benefit

PAST ➤ Explore the effects of COVID on undergraduate nursing students

PRESENT ➤ Prepare students to enter nursing profession

FUTURE ➤ Help address nursing shortage

EDUCATION ➤ Provide foundational data to support future nursing education delivery redesign



Significance of Project

COVID-19



Healthcare Settings

COVID exacerbated the need for bedside nurses

Academia

Rapid shift of educational delivery methods to virtual classrooms and clinical experiences is unknown

Nursing Shortage

22% registered nurse deficit is predicted for TN by 2030 (Hightower, 2019).

Students

Many considered at-risk, disadvantaged, struggling to adjust.

Please Use Hand Sanitizer



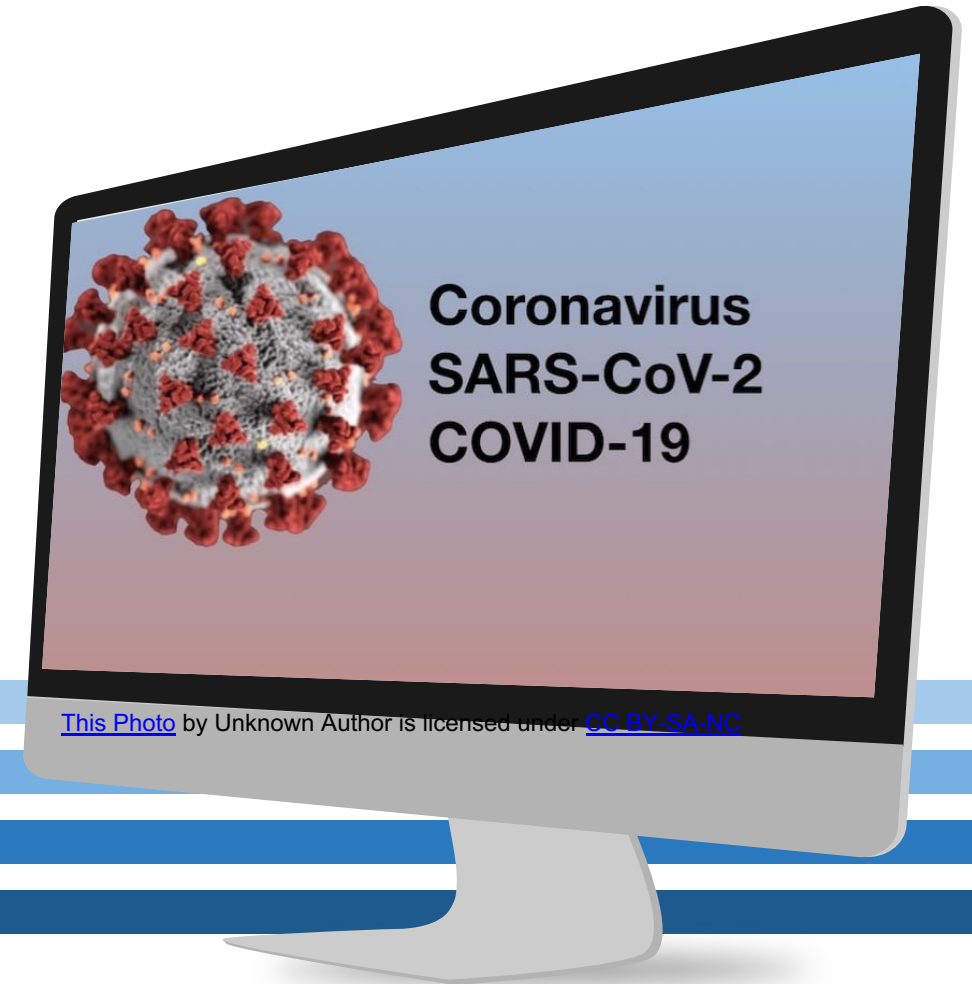
Study Limitations

COVID-19

01 Single College of Nursing

02 Convenience sample

03 One geographical region

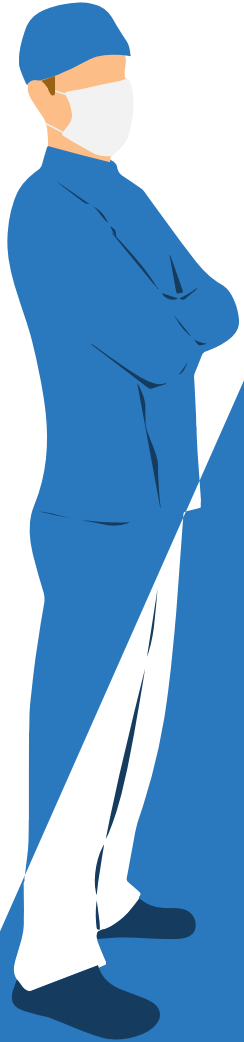


Conclusion

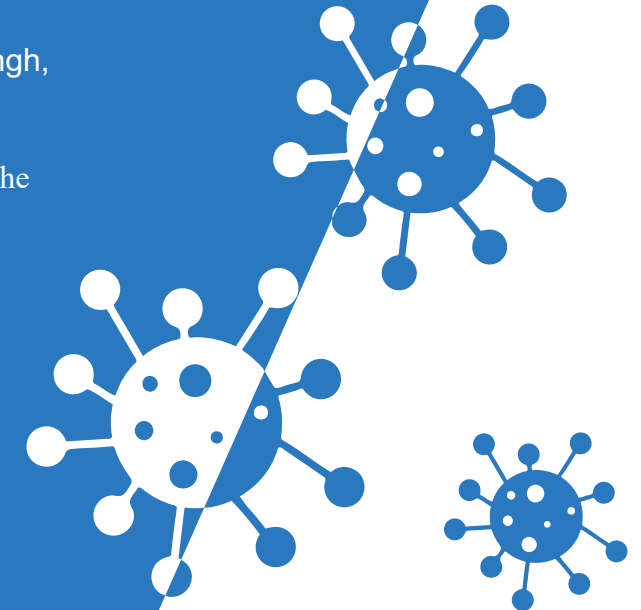


The impact of COVID-19 on traditional BSN student education and associated outcomes must be better understood in an effort to prepare students for success in the nursing profession, as well as to assure an adequately prepared pipeline of nurses to address predicted nursing shortages.

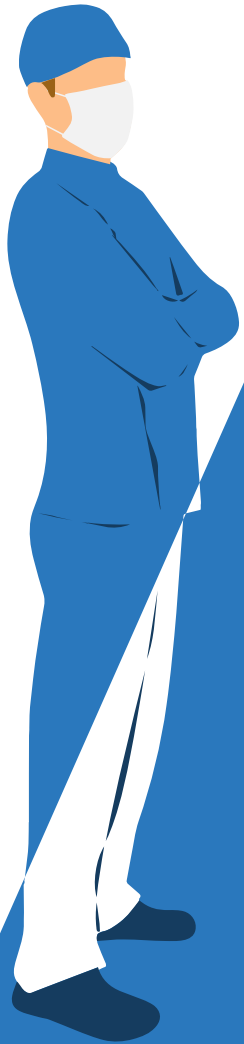
References



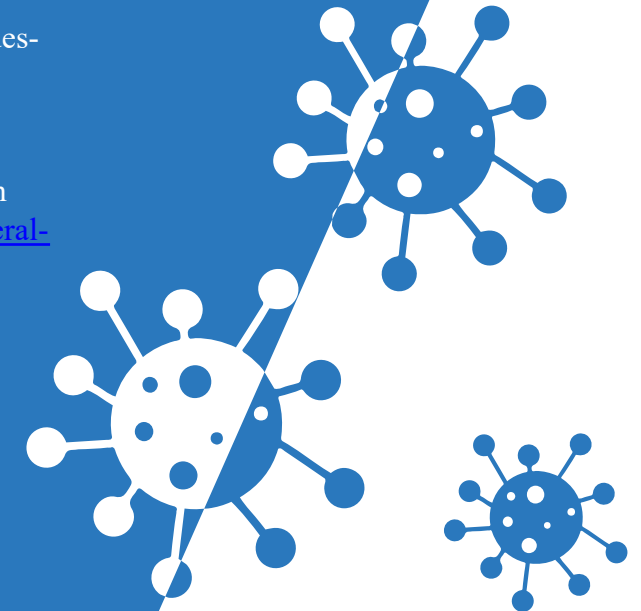
- Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., ... & Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. *The lancet*, 383(9931), 1824-1830.
- American Association of Colleges of Nursing. (2020, March 20). Considerations for COVID-19 preparedness and response in U.S. schools of nursing. https://www.aacnnursing.org/News-Information/COVID-19/AACN-Recommendations?utm_source=MagnetMail&utm_medium=email&utm_term=web@aacnnursing.org&utm_content=Consideration%20for%20COVID%2D19%20by%20AACN&utm_campaign=DRAFT3%3A%20Considerations%20for%20COVID%2D19%20Preparedness%20and%20Response%20in%20U%2ES%2E%20Schools%20of%20Nursing
- Brown, J., McDonald, M., Besse, C., Manson, P., McDonald, R., Rohatinsky, N., & Singh, M. (2020). Nursing students' academic success factors: A quantitative cross-sectional study. *Nurse Educator*. [Epub ahead of print]. DOI: 10.1097/NNE.0000000000000882
- Buerhaus, P.I., Skinner, L.E., Auerbach, D.I., & Staiger, D.O. (2017). Four challenges facing the nursing workforce in the United States. *Journal of Nursing Regulation*, 8(2), 40-46. <https://doi.org/10/ggcht5>
- Igbo, I.N., Straker, K.C., Landson, M.L., Symes, L., Bernard, L.F., Hughes, L.A., & Carroll, T.L. (2011). An innovative, multidisciplinary strategy to improve retention of nursing students from disadvantaged backgrounds. *Nursing Education Perspectives*, 32(6), 375-379.
- Kramlich, D., Holt, K., & Law-Ham, D. (2020). Strategies to promote the success of academically at-risk Accelerated Bachelor of Science in Nursing students. *Nurse Educator*, 45(4), 193-197. DOI: 10.1097/NNE.0000000000000748



References Continued



- Lewis, L.S. (2020). Nursing students who fail and repeat courses: A scoping review. *Nurse Educator*, 45(1), 30-34. DOI: 10.1097/NNE.0000000000000667
- National Council of State Boards of Nursing. (2020). Number of candidates taking NCLEX examination and percent passing, by type of candidate. https://www.ncsbn.org/Table_of_Pass_Rates_2019_Q4.pdf
- Spurlock, D. (2020). The nursing shortage and the future of nursing education is in our hands. *Journal of Nursing Education*, 59(6), 303-304. <https://www.healio.com/nursing/journals/jne/2020-6-59-6/%7Bb90a4e9c-5ac3-472f-b99c-48ba1631b027%7D/the-nursing-shortage-and-the-future-of-nursing-education-is-in-our-hands.pdf>
- TN Office of the Governor. (2020, March 12). Gov. Bill Lee issues executive order declaring state of emergency in response to COVID-19. <https://www.tn.gov/governor/news/2020/3/12/gov--bill-lee-issues-executive-order-declaring-state-of-emergency-in-response-to-covid-19.html>
- Williams, M.G. (2010). Attrition and retention in the nursing major: Understanding persistence in beginning nursing students. *Nursing Education Perspectives*, 31(6), 362-367.
- World Health Organization. (2020). WHO director-general's opening remarks at the media briefing on COVID-19 – 11 March 2020. <https://www.who.int/director-general/speeches/detail/who-director-general-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
- World Health Organization. (n.d.). Coronavirus disease (COVID-19) pandemic. https://www.who.int/emergencies/diseases/novel-coronavirus-2019?gclid=CjwKCAjwx6WDBhBQEiwA_dP8rTq4Lnve1UnToWHL9yNzGvPuiOQOfZc-yW-um8UO7dHhirRBh1kP9RoCF_MQAvD_BwE



A stylized world map in a light blue color is centered in the background of the image. The map shows the outlines of continents and oceans.

THANK YOU

