

# Exploring Covid-19's Impact On Undergraduate Nursing Students

Riley Martens\*, Mary Hou, Susan Isherwood, & Colleen Cuthbert

University of Calgary

*The researchers aimed to assess the effects of the COVID-19 pandemic on nursing education through semi-structured interviews with undergraduate nursing students. The researchers explored themes related to online education, clinical placements, and mental health. Findings revealed that the sudden shift to online learning caused increased stress, and decreased confidence. Clinical placements were affected, leading to missed time and altered learning experiences. Mental health suffered as students faced stressors and challenges brought on by the pandemic. These interviews elucidate the challenges faced by nursing students during the COVID-19 pandemic and provide valuable information for future planning in nursing education during crises.*

The COVID-19 pandemic had a profound impact on education, healthcare, and personal lives (Hronis & Dixon, 2021, p.3). This qualitative research study was initiated to assess COVID-19's impact on nursing education. This was accomplished through semi-structured interviews with undergraduate nursing students. This study was approved by the University of Calgary's Conjoint Health Research Ethics Board (CHREB).

Nursing school has been documented as stressful and challenging for students during non-pandemic times (Olvera Alvarez et al., 2019). Before the pandemic, nursing students found the demands between hospital and classroom to be challenging to navigate (Pulido-Martos et al., 2012). COVID-19 increased the stress students experience between classroom and clinical learning (Alici & Copur, 2021). The aim of this study was to generate descriptive information relating to the experiences of undergraduate nursing students during the COVID-19 pandemic. This information will help outline future research, describe the challenges of nursing education through crises, and inform future planning for nursing education during pandemics.

## Method

Using qualitative methodology, ten nursing students were recruited from the University of Calgary through email. Data were gathered using face-to-face interviews virtually through

corresponding author – [riley.martens@ucalgary.ca](mailto:riley.martens@ucalgary.ca)

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Zoom using a Question Guide for Interviews (Appendix A). The interviews followed a semi-structured format, meaning the questions were open ended and covered a range of topics, and the answers were audio recorded verbatim (Jamshed, 2014). Another component of the semi-structured format is that the interview was guided by premade questions that was updated and refined as interviews are completed, making it iterative (Jamshed, 2014). The question guide for this study was created by the authors. A research transcriptionist produced written logs of the recordings, which were then analysed using thematic analysis. The qualitative analysis of the interviews was completed following the thematic analysis methodology outlined by Braun and Clarke (2006). Data was organized using NVivo 12. A total of ten interviews were completed at which point thematic saturation had been reached.

Two of the authors, MH and SI, had employed this methodology previously when examining COVID-19's impact on general surgery residents. This same approach was then applied to the nursing student population in order to understand their perspectives of the consequences of COVID-19. The interview questions were drawn from the previous study concerning physicians in the general surgery residency program and then adapted to an undergraduate nursing population to cover additional topics such as online classes, test taking, and study habits. As the interviews progressed, the question guide was altered to further investigate the topics nursing students discussed frequently including academic dishonesty and stress. The interviews were conducted by a single researcher, RM, and were designed to explore the multifaceted impact COVID-19 had on the lives of nursing students. The ten interviews were conducted in the Spring of 2022 with varying lengths. Interviews were typically between 35 to 55 minutes in length.

## **Results**

The ten undergraduate nursing students were from different years in the program with different levels of experience. One student was from the first year of the program. Three students were from the second year, with four students being from third year. The remaining two students were from the fourth year of the program.

The one student in first year had only introductory courses with no clinical component, thus all their courses were online. The second-year students had clinical placements in community health and long-term care settings. Traditionally these would be in-person, but a few of these experiences were entirely virtual for students. Students in their third and fourth years were placed in hospitals for in-person experiences. These students had a mixture of online theory classes and in-person labs. Three major themes emerged from the ten interviews: online learning, clinical placements, and mental health.

### **Online Education**

There was a complete transition from in-person to online in March 2020 and classes did not return to in-person until January 2022. One of the first components transitioned to in-person in September 2020 were skill labs, which are practice sessions with equipment and simulated

environments to help develop clinical skills (Bugaj & Nikendei, 2016). This blended delivery continued with online classes and in-person labs until January 2022.

When interviewed about COVID-19's impact on the delivery of education, the interviewees reported increased perceived stress from the online learning environment. Online learning affected confidence in their academic skills and reduced their classroom support.

Nursing students before COVID-19 encountered stressors in the classroom specifically workload management and studying (Pulido-Martos et al., 2012). This matched to what students reported. Particularly the stress from studying, however, there was little concern reported about workload management. This is reflected in one student's comment about the workload of online education "I think it still felt like more draining and straining almost even though like the actual like quantity was less because it was just like really unmotivating to want to do anything when it was online."

In the first two interviews, academic dishonesty was not included in the question guide, but included after the first interviewees discussed it. Eventually, all ten of the students interviewed reported of being aware of academic dishonesty when inquired. Academic dishonesty was reported in multiple forms, individual tests were written in groups through Zoom and the students would use study resources while writing a test. One student shared "there's like a ton of academic dishonesty, like everybody cheats." Eaton (2020) discussed that higher stress can influence the likeliness of academic dishonesty.

Students should be responsible for maintaining academic integrity, but faculty should change courses to fit the learning environment (Eaton, 2020). This matches with what students reported, that instructors altered the courses to have more open book assignments and tests to account for the open nature of online education. Eaton (2020) shares that there is a difference between online learning and remote emergency learning with the COVID-19 pandemic fitting into the latter.

Regarding a lack of confidence in academic skills, interviewees stated they were concerned about writing tests and studying content. One student expressed that they had never written an in-person test in post-secondary before as all their previous post-secondary education was delivered virtually. "I feel like I don't even remember how to study, like I've never done a single in-person university test in my entire life which I think is kinda crazy." This caused concern among several of the interviewed students as they reported that they lacked the proper study habits to succeed when education would switch back to in-person. Students expressed that because the courses were shifted from closed-book to open book or more assignment-based they did not retain the knowledge as much.

Eaton (2020) observed when the emergency transition to online learning at the institution was made, some instructors did not adapt courses to the online learning environment. This provides some contextual information regarding courses nursing students might have taken and the translation of content to the online learning environment. A survey of pre-nursing students doing an anatomy course demonstrates similar perceptions to the students interviewed in the current study (Wilhelm et al., 2021). These students identified lower confidence, engagement,

and learning even though grades improved during online learning as compared to in-person (Wilhelm et al., 2021).

Another source of stress for students was the reduction of in-class socialization. Students did not interact with peers as much in an online environment, citing breakout rooms were underutilized or awkward. Interviewees stated that asking peers for help or clarification was not as available as in-person. Studying also became a more individual pursuit. Nursing students expressed frustration and sadness that in-person study groups were no longer an option available to them due to restrictions. During the interviews, one student expressed, “I think that was something our year has sort of like missed out on is just like making friends within nursing and getting that support from each other.” It was more challenging for nursing students to meet others not in their classes from the Faculty of Nursing. Students shared that before COVID-19 they would ask upper years for advice about which classes to take or strategies to succeed. Multiple interviewees were frustrated that this was harder to do, especially for newly admitted students who did not know any students from upper years.

The nursing program includes labs for students to practise skills before direct patient contact. Labs alternated between in-person and virtual every week. Certain students reported that the social skills were typically saved for online delivery, while the hands-on skills were done in-person. The social skills were supported with online simulations. The nursing students reported mixed feedback about the online simulations, with some sharing they were helpful and others stating they were awkward.

Assessments, medication administration, and patient care were supported through in-person labs with mannequins and lab partners. Wilhelm et al. (2021) reported that pre-nursing students who worked with cadavers, but transitioned to online learning, identified lower levels of confidence and engagement because they missed the physical learning of in-person cadaver labs.

## **Clinical Placements**

To help build technical skills in nursing, students will get placed in a variety of healthcare settings including hospitals, long term care, and community health clinics. The students interviewed had different levels of clinical experience dependent on what year of the program they were in.

In the interviews, skills were divided and labelled as ‘soft skills’ and ‘hard skills’. Soft skills are the abilities nurses use to develop therapeutic relationships with patients and work as a team such as communication, observation, and empathy (Laari et al., 2022). Soft skills can make hard skills more effective (Laari et al., 2022). Hard skills were the more technical skills nurses use in assessments, medication administration, and patient positioning (Laari et al., 2022).

When the interviewees discussed clinical placements, their experiences were often identified as sources of stress. Prior to COVID-19 specific stressors to nursing students in the clinical setting were identified as causing harm to patients and having insufficient knowledge about conditions and treatments (Pulido-Martos et al., 2012). This does not align with what the students shared as COVID-19 overshadowed other stressors. The elements from clinical

placements highlighted by the students during the interviews were the transmission risk, missed time, and skill development.

Clinical placements presented as a location for where students could contract the virus and transmit it to others. The students shared that this had social and academic ramifications. Missing clinical time because of testing, screening and quarantining policies was a source of anxiety for many students. If students demonstrated symptoms positive for COVID-19, exposed by a family member or patient, or tested positive, they had to quarantine for ten to fourteen days.

Passing courses in nursing is contingent on completing the required clinical hours. This standard remained for COVID-19, with clinical hours still a requirement to successfully pass a course. The leniency the faculty had is unknown. If students missed clinical time, students were given 'make-up' assignments to replace missed clinical time. Students expressed they did not feel these assignments made up for lost clinical time.

COVID-19 also changed the location of clinical placements because of outbreaks or the risk of transmission, including some clinical placements that were switched entirely online. The community health placement before COVID-19 was traditionally in-person, but because of COVID-19 a student reported "our term three clinical was completely online, and if I'm being honest, I feel like I didn't get anything out of it because we didn't interact with like a single person." Students expressed this impacted the confidence they had in their abilities and nursing skills. A similar study found that nursing students reported simulations and online practicums replacing in-person options were underwhelming (Thirsk et al., 2022). Thirsk et al interviewed students who expressed frustration about online placements and simulations (2022). Matching this research, students expressed mixed opinions about online simulations such as videos, roleplay, and case studies, however there was learning lost (Thirsk et al., 2022).

McKinnon and Hubley (2023) found that nursing students working outside of school in healthcare facilities were able to replace or substitute the experiences from missed clinical experiences. Working and schooling at the same time caused stress for many students resulting in a lower quality of life and impacting students emotionally and mentally (McKinnon & Hubley, 2023). The lack of confidence these students reported in their skills can be filled with employment outside the classroom. One student reported her confidence in interacting with patients and care activities improved over the summer while working as a Health Care Aide.

## **Mental Health**

Nursing students when interviewed, typically discussed topics in relation to stress especially clinical and classroom activities. Mental health was examined in relation to reported stressors and observed burnout. In a systematic review regarding stressors nursing students face, similar levels of stress were encountered by students in all years of the program, but the sources of stress were different (Pulido-Martos et al., 2012).

All the students interviewed identified sources of stress from classes and clinical placements. The upper year students were concerned about missing clinical time due to quarantine and COVID-19 testing. Students from the first and second years were concerned

about succeeding in online testing environments and about developing sufficient clinical skills for when they are ‘in the hospital’.

Nearly all the students reported their personal mental health has been impacted by the pandemic. Additionally, the frequent time at home was a factor in poor mental health. One student reported “like you have nothing to distract yourself with and so it's all you're ever doing is focusing on school and then, again, it's pretty easy to start thinking about the negatives.” Nursing students in the final year of the program during COVID-19 perceived a risk level twice as great of experiencing mental health challenges compared to final year students before COVID-19 (Reverte-Villarroya et al., 2021). However, none of the students interviewed reported using mental health resources for support.

The students identified that the University of Calgary offered support, usually through the Student Wellness Centre, but they did not utilise these resources. The most common cited reasons were poor past experiences, not knowing where to start, and the resources were too general. One student explained “I wasn't aware at least, like there wasn't anything like specific, like I know the general (like wellness centre) and things like that but, nothing like really that I knew of.”

Burnout from work is caused by consistent emotional and relational stressors resulting in fatigue, negativity, and reduced work ethic (Maslach et al., 2001). Burnout was commonly reported by students in the interviews caused by the frequent switching of virtual and in-person classes. While the students were in hospitals and clinics for practicums, they observed burnout in the nursing staff they were working alongside. One positive aspect was that the individuals we interviewed were confident about finding employment upon graduation due to existing burnout and the current nursing shortage (Hirst et al., 2022).

A systematic review identified burnout rates among nurses at 54% and burnout rates are inversely correlated to level of education (Zhang et al, 2018). Nurses with graduate degrees reported lower levels of burnout than those with undergraduate degrees (Zhang et al., 2018). Nursing students having not completed their undergraduate degree may be more easily prone to burnout. The cited rate of burnout among nurses was pre-pandemic levels, nurses and nursing students may be more disposed to burnout since COVID-19 and existing burnout may have been exacerbated as was reported by the interviewees.

## **Limitations and Reflections**

A point of feedback this study has received is whether the results are applicable beyond undergraduate nursing education. Themes of online education, experiential learning, and disruption were presented at the 2023 Conference on Postsecondary Learning and Teaching, which this research encapsulates from a nursing perspective.

This research and the themes that capture the students’ experiences extend to other healthcare professions, especially the fear of contracting COVID-19 and the challenges of clinical learning. The challenges shared by these nursing students may be relatable to students in healthcare disciplines such as medicine, physiotherapy, and social work.

The sample size of ten students was a limiting factor in this study. The ability to extrapolate the results to other populations is a limitation of qualitative inquiry in general and this study with a small sample size. Additionally, only the perspective of the students was represented in this sample. No interviews with administrators, educators, or instructors occurred, warranting future research.

## Conclusion

This study examined the impact of the COVID-19 pandemic on undergraduate nursing students from the University of Calgary's Faculty of Nursing in Canada. Through semi-structured interviews, the researchers explored the experiences of students, which were captured by the themes of online learning, clinical placements, and mental health.

The findings revealed that nursing students faced unique challenges in adapting to online education. The shift to virtual platforms disrupted their usual learning environment and posed difficulties in testing and skill development. Clinical placements were also significantly affected, with missed hours and the need for make-up assignments. The absence of direct patient interactions and face-to-face experiences impacted students' confidence and skill development. Mental health emerged as a prominent concern among nursing students, compounded by the fear of contracting COVID-19. This study highlights the need for support systems for nursing students during times of crisis.

An additional aspect highlighted by students how rampant cheating and academic dishonesty was during online classes. The lack of barriers to accessing resources and working with peers presented a challenge to ensuring academic conduct. When planning classes and assignments in the future, additional measures should be considered for virtual delivery. As students reported, some instructors changed assignment to be more open-ended, cooperate with peers, and to access resources, while some classes had no changes. At the time of the interviews, generative artificial intelligence (AI) tools such as Chat-GPT were not present. Academic misconduct should not be taken lightly, but with the nature of online learning and new generative AI tools, it is more abundant. Academic misconduct may impact the quality-of-care nursing students are able to provide in the long-term.

Further research is warranted to explore the long-term effects of the pandemic on nursing students' education and career trajectories, as well as the effectiveness of interventions aimed at supporting their mental health and well-being. Ultimately, addressing the challenges faced by nursing students during crises like the COVID-19 pandemic is crucial for their professional development, education, and the overall quality of healthcare delivery.

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## Appendix A

### Question Guide for Interviews Skill Development

Can you tell me what your perspectives are about how COVID has impacted clinical development?

*Prompts:*

- In terms of placements, shadowing opportunities, classes, labs?
- How did online education in terms of labs, classes affect you?
- What were specific challenges you had switching from in-person to online?
- How do you think you could have been better prepared?

Can you tell me what your perspectives are about how COVID has impacted skill development?

*Prompts:*

- Were you able to use virtual or simulation labs to enhance your skills and learning? How applicable and useful were the labs to actual clinical development?
- Did you have any labs online? Did you miss any hands-on practice opportunities? Did you

Are there changes that were made during COVID that you liked and want to keep moving forward?

*Prompts:*

- Did online classes make things easier, save time for you? Were they (in)convenient?
- Would you like to keep any of the changes made to the delivery of your courses/labs/clinical?

Are there any other impacts COVID-19 and restrictions had on your clinical development and education you would like to include?

Did your experience of COVID-19 and the restrictions change as the pandemic progressed? How would you compare your clinical training and educational experience during the beginning of the pandemic to now?

Mental health/wellbeing

- How has COVID affected your mental health and overall wellbeing? In what ways has your mental health and wellbeing been affected?
- Being in clinical practice and coming in contact with covid patients may have been stressful. Can you expand on whether you were afraid of catching COVID-19? Were you concerned about being in contact with COVID patients? Were you concerned about spreading COVID to others?

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- Did this concern about the increased exposure to covid impact your Family/partner/kids in any way? How so?
- Were you adequately trained and prepared to use PPE. Were you provided with adequate PPE?
- Did your overall work hours (between class and clinical) increase or decrease?
- Did pandemic and restrictions affect the level of burnout you experienced? How did impacts to your mental health and wellbeing affect your experience of burnout?
- Do you think there was a change in burnout level with your colleagues?
- Did you feel as though you received practical support from the university and faculty in terms of support for mental health and wellbeing? Did the support the university/faculty/program offer you have any impact?

Career trajectory

- How has the impact COVID-19 and the restrictions had on your education and training impact your ability to find a job after graduation?
- Has COVID changed the area of interest you want to go to? Have restrictions/changes exposed you to any new placements/interests?
- Has the experience of learning/clinicals during a pandemic impacted where you would like to go for preceptorship/post graduation?
- Has the restrictions in interprovincial/international travel affected your ability to pursue interprovincial/international opportunities?
- How did completing a nursing degree during a pandemic affect your studying and preparation for the NCLEX?

End

- Is there anything else that you'd like to add about your experience of undergraduate nursing education during a pandemic that we haven't already touched on?