

## THE IMPACT OF COVID IN HIGHER EDUCATION

**COVID-19: Impact on undergraduate nursing education in Sri Lanka****Ilinkoon Mudiyansele Prasanthi Sumudrika Ilinkoon,<sup>1</sup> Gnanaselvam Kisokanth,<sup>2</sup> Sudath Shirely Pathmasiri Warnakulasuriya<sup>2</sup>***<sup>1</sup>Department of Nursing and Midwifery, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda; <sup>2</sup>Department of Clinical Nursing, Faculty of Nursing, University of Colombo, Sri Lanka***Abstract**

“Novel Corona Virus” (COVID-19) is a new infectious disease spreading all around the world that has a globally significant morbidity and mortality at present. Nurses as frontline care providers in hospitals and community are exposed to a major risk. This brief report aims at providing an overview of COVID-19 impacts on Sri Lanka and to highlight educational implications from the perspective of nursing degree programs. The major impacts of COVID-19 on nursing education were unequal access to online distance learning, disruption of academic calendars, cancellation of clinical placements, teaching and learning gap, lack of facilities for online learning, disruption towards professional development, and inability to conduct proper clinical assessments and standard operationalization procedures. It suggests that higher education institutions should take actions to provide material support for students from low-income households to close the gap between teaching and learning and training academics on different online teaching and learning strategies and assessments.

**Introduction**

During last two decades, there were several epidemics in some regions in the world such as Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) from 2002 to 2003, H1N1 influenza in 2009, and the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in 2012.<sup>1</sup> Following an outbreak of pneumonia of unknown reason was first reported on 31<sup>st</sup> December 2019 from Wuhan City in Hubei Province of China, the disease was diagnosed as “Novel Corona Virus” (COVID-19). The pathogen for this pneumonia was subsequently named as SARS coronavirus 2 by the International Committee on Taxonomy of Viruses.<sup>1-2</sup> Since then, COVID-19 has made a huge impact socio-economically throughout the world.

COVID-19 is very contagious and the incubation period of the virus ranges from 2-14 days.<sup>3</sup> It mainly transmits through close contact and respiratory droplets.<sup>4</sup> The most common symptoms at onset are fever, dry cough, and fatigue.<sup>5</sup> In severe cases includes

severe pneumonia, ARDS, sepsis and septic shock.<sup>6</sup> Furthermore, older people, and those who have pre-existing medical conditions are more likely to experience serious illness.<sup>7</sup>

It is evident that the COVID-19 pandemic would create a globally significant economic impact which will result in adverse outcomes in healthcare, social and economic sectors not only in the short term but also in medium and long term as well.<sup>8</sup> Since the identification of the COVID-19 pandemic, it has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges.<sup>9</sup> As a low middle-income country, such a pandemic can potentially paralyze the Sri Lankan healthcare system with the lack of resources and the absence of an advanced primary health care system. This article aims at discussing major issues related to nursing education following the COVID-19 pandemic in Sri Lanka.

**Impact of COVID-19 in Sri Lanka**

At present, a total of 2,984 patients have been identified and 12 deaths related COVID-19 have been reported in Sri Lanka. Following the detection of first few patients in Sri Lanka, government declared closure of educational institutions similarly to many countries who have controlled the spread of H1N1 flu pandemic in 2009<sup>4</sup> followed by imposing curfew for the entire country. This outbreak prompted the health authorities to implement a series of public health measures and hospital policies. At present, the health authorities have controlled the COVID-19 clusters by using the strategy of contact tracing and case isolation<sup>10</sup> and still continuing testing in the community and returnees from overseas.

**Materials and Methods**

This brief report was written based on preliminary observations and review of published literature on COVID-19, impact on education, nursing education and pandemics, online teaching in nursing education in databases such as MEDLINE, EBSCOhost, PsycInfo and Google Scholar. The articles were selected through titles and abstracts during March-June 2020.

**Significance for public health**

*This article emphasizes the impact of COVID-19 pandemic on nursing education where the clinical training is a major component in nursing curricula. It prompts nursing academics to think advance on future educational needs of the world and how to adapt with the pandemic situations. It is an advantage for higher education institutions to facilitate nursing faculties to utilize new technologies and revise nursing curricular to use blended learning activities which would be the best approaches in future nursing education.*

## Results

### Impact of COVID-19 on education in Sri Lanka

Most of the governments around the world temporarily closed educational institutions to contain the spread of the COVID-19 pandemic<sup>11</sup> as part of a physical distancing policy to slow the transmission and ease the burden on healthcare systems.<sup>12</sup> But, these nationwide closures are impacting almost 70% of the world's student population.<sup>11</sup> In the middle of April 2020, approximately 1.723 billion learners have been affected due to school/university closures in response to the pandemic.<sup>9</sup> It has been advised to continue learning through online/e-learning strategies, assigning reading and exercises and radio, podcast or television broadcasts of academic content during the COVID -19 pandemic by UNICEF.<sup>13</sup> However, it is worthwhile to think about the impact of long term closure of educational institutions and shifting of means of education to distance learning especially on those who are living in poverty, and are likely to exacerbate existing inequalities despite the detrimental social and economic consequences brought about by the pandemic alone.<sup>12</sup> The closure of universities has widespread implications for students, faculties, administrators, and the institutions themselves.<sup>9</sup>

### Challenges for undergraduate nursing education following COVID-19 pandemic

The Open University of Sri Lanka is conducting a BSc Nursing degree program for registered nurses since 1995 using Open and Distance Learning mode. University of Sri Jayewardenepura, Sri Lanka, the first conventional university to initiate a BSc (Honours) in Nursing Degree, which is a Preregistration Degree course implemented, in 2005. At present, six state universities offer nursing degrees. As these conventional universities mainly conduct face-to-face teaching than online teaching, nursing education in all these universities have been fully or partially affected by the COVID-19 pandemic.

The nurses training programs have been designed to equip nurses with competencies in providing safe and effective nursing care of high standard in a variety of settings. The four-year degree program consists of lectures, tutorials, laboratory practice, clinical and community field experience, presentations, group work, research projects and a lot of extra-curricular activities during the university life. Clinical training for students continues from first year to final year starting from basic nursing skills to advance nursing procedures. All these academic and extra-curricular activities lead the students to become competent with knowledge, skills, attitudes and team spirit and dedication to nursing. But COVID-19 has impacted towards the usual learning environment of the undergraduates resulting major challenges to the faculties and the students. It has been mentioned that medical education is grappling with the changes that have been made and attempting to consolidate these with their plan of career development.<sup>14</sup> Similar efforts are made with the nursing education all around the world. All aspects of nursing activities are affected by this pandemic, and healthcare facilities have responded to nursing education and students' clinical needs in a variety of ways.<sup>15</sup> Some have restricted student presence in their organizations, while others have welcomed healthy students.<sup>15</sup> All the teaching activities have been transformed to online distance learning via platforms like Zoom, Google classroom, WhatsApp groups, Learning Management Systems (LMS) etc. in nursing faculties in Sri Lanka. Similar to many lower middle income countries, lack of access to technology and fast, reliable internet access have been the major challenges for students in rural areas in Sri Lanka.<sup>9,16</sup> There are many efforts made by the high-

er education authorities such as providing free access to LMS and free data used for Zoom meetings by the Lanka Education and Research Network for academics. But the question remains whether all the students have technological means in terms of computers and/or smart phones and the required technological competency/support at their homes as they are coming from different social strata of the country. This is a devastating challenge for low-income countries where the nursing education is under low resources and lacks of funding. Furthermore, this would be an opportunity to train academics to use of new technologies and innovative teaching which can be continued after the pandemic. The majority of academics have no or little experience in online teaching and assessments where face-to-face teaching has been the preferred method of teaching/learning strategy in Sri Lanka to date. Furthermore, the replacement of in-person classes with online distance learning might create a loss of collaborative experiences, which leads to a significant detriment to education.<sup>14</sup> It has been understood that undergraduates are losing a lot of advantages of being with patient care and study the pathology and nursing care perspectives during this time. The procrastination of the clinical practice due to the pandemic and completing theoretical aspects of patient care leads to disturbing the flow of the knowledge distribution to the undergraduates. It is similar to the medical education where the cancellation of clerkships is a serious issue.<sup>14</sup> Providing adequate Personal Protective Equipment (PPE) during clinical practice for undergraduate is a problem that has not been solved at present in Sri Lanka, similarly to many other countries.<sup>16</sup> Although many developed countries use simulation, telehealth, and virtual reality to provide relevant clinical experiences during this pandemic<sup>16</sup> the use of those technologies in the Sri Lankan setting is questionable. But using videos on simulation for different nursing procedures are under consideration with minimum facilities in faculties. Furthermore, personal and professional development of students through presentations, group work, and teamwork has been interrupted during this period of time. Academics need to come up with ways of achieving these objectives through the distance learning methods and try to produce a graduate who has all the components in graduate profile of the faculty, which is a huge responsibility. Despite the uncertainty of the situation, it is always advisable to look at what previous pandemics taught us. It has been evidenced that nursing education has faced similar challenges during previous pandemics such as SARS, H1N1 etc.<sup>17</sup> The SARS outbreak affected both clinical teaching and assessment in nursing education as clinical teaching at all hospitals were suspended from the beginning of the outbreak in Hong Kong.<sup>17</sup> As a solution to that, the nursing training institutions have utilized alternative means of updating and assessing students' clinical knowledge and skills and the laboratories have been used to facilitate clinical practice and assessment.<sup>17</sup> Furthermore, boosting morale and managing stress have been highlighted as essential ingredients to be incorporated into the curriculum,<sup>17</sup> which will help to undergraduate nurses to work with frontline nurses and get more exposure and confidence to work during a pandemic.

## Conclusions

This paper exposes the main areas of impacts of COVID -19 towards nursing education as challenges faced by the undergraduate nurses to achieve the learning outcome through distance online methods and challenges faced by nursing academics, who have to navigate the clinical and theoretical teaching towards distance online learning. It suggests facilitating distance learning by increasing the availability of technologies for students and academics, training on online teaching and assessment strategies for academics and improving infrastructure facilities for nursing skills

labs to use new technologies such as simulation, telehealth, and virtual reality to provide relevant clinical experiences to undergraduates. .

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**Ethical approval:** The authors of the present study were loyal to the intellectual property of the articles and avoided plagiarism. There was no human and animal based data collection involved in this study.

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## References

- Cascella M, Rajnik M, Cuomo A, et al. Features, evaluation and treatment Coronavirus (COVID-19). StatPearls Treasure Island (FL): StatPearls Publishing; 2020.
- Zheng YY, Ma YT, Zhang JY, Xie X. COVID-19 and the cardiovascular system. *Nature Rev Cardiol* 2020;17:259–60.
- Epidemiology Unit, Ministry of Health and Indigenous Medical Services. Total number confirmed deaths details of COVID 19 diagnosed patients. 2020. Available from: [https://www.epid.gov.lk/web/index.php?option=com\\_content&view=article&id=228&lang=en](https://www.epid.gov.lk/web/index.php?option=com_content&view=article&id=228&lang=en), Accessed: 26.05.2020.
- World Health Organisation. Modes of transmission of virus causing COVID-19 : implications for IPC precaution recommendations. Scientific Brief, March, 1–3. 2020. Available from: <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>, Accessed: 30.04.2020
- Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020;395:497–506.
- Ministry of Health Sri Lanka. Provisional clinical practice guidelines on COVID-19 suspected and confirmed patients. Ministry of Health Sri Lanka, March 2020. Available from: [http://www.epid.gov.lk/web/images/pdf/Circulars/Corona\\_virus/covid-19\\_cpg\\_version\\_5.pdf](http://www.epid.gov.lk/web/images/pdf/Circulars/Corona_virus/covid-19_cpg_version_5.pdf), Accessed: 01.04.2020.
- Epidemiology Unit, Ministry of Health and Indigenous Medical Services. COVID 19 fact sheet (Issue 011); 2020. Available from: [https://www.epid.gov.lk/web/index.php?option=com\\_content&view=article&id=228&lang=en](https://www.epid.gov.lk/web/index.php?option=com_content&view=article&id=228&lang=en), Accessed: 15.05.2020.
- Directorate of Environmental Health, Occupational Health and Food Safety. Operational guidelines on COVID-19 outbreak for work settings (Issue April). Directorate of Environmental Health, Occupational Health and Food Safety, Ministry of Health and Indigenous Medical Services, Sri Lanka; 2020. Available from: [https://eohfs.health.gov.lk/occupational/images/2020/Workplace\\_guidelines\\_for\\_prevention\\_of\\_COVID-19.pdf](https://eohfs.health.gov.lk/occupational/images/2020/Workplace_guidelines_for_prevention_of_COVID-19.pdf). Accessed: 16.05.2020.
- Mustafa N. Impact of the 2019–20 coronavirus pandemic on education. Available from: [https://www.researchgate.net/publication/340849956\\_Impact\\_of\\_the\\_2019-20\\_coronavirus\\_pandemic\\_on\\_education](https://www.researchgate.net/publication/340849956_Impact_of_the_2019-20_coronavirus_pandemic_on_education).
- Hellewell J, Abbott S, Gimma A, et al. Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts. *Lancet Global Health* 2020;8:e488–96.
- UNESCO. COVID-19 Educational Disruption and Response. UNESCO; 2020. Available from: <https://en.unesco.org/covid19/educationresponse>. Accessed: 16th May 2020
- Van Lancker W, Parolin Z. COVID-19, school closures, and child poverty: a social crisis in the making. *Lancet Public Health* 2020;5:e243–4.
- Bender L. Key messages and actions for prevention and control in schools. In: Key messages and actions for COVID-19 prevention and control in schools. Education in emergencies. UNICEF, New York; March 2020.
- Ferrel MN, Ryan JJ. The Impact of COVID-19 on Medical Education. *Cureus* 2020;12:10–3.
- Jackson D, Bradbury-Jones C, Baptiste D, et al. Life in the pandemic: Some reflections on nursing in the context of COVID-19. *J Clin Nurs* 2020;1–3. doi: 10.1111/jocn.15257
- Morin KH. Nursing Education After COVID-19: Same or Different? *J Clin Nurs* 2020. doi: 10.1111/jocn.15322
- Thompson DR, Lopez V, Lee D, Twinn S. SARS - A perspective from a school of nursing in Hong Kong. *J Clin Nurs* 2004;13:131–5. doi: 10.1046/j.1365-2702.2003.00884.x.