Student nurses, nursing curriculums and emergency responses to Covid-19: A scoping review

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A B S T R A C T

Background: Emergency healthcare responses to COVID-19 substantially impacted on nursing curriculums and student nurses worldwide. Understanding the extent of this impact on their learning experiences could inform nursing curriculums going forward.

Objective: Identify the range and nature of literature related to emergency healthcare response to COVID-19 and its impact on student nurses and nursing curriculums. Explore and analyze the findings within the searched literature. Position findings within the broader context of the ongoing impact of COVID-19 on nursing curriculums. Identify gaps in the literature.

Design: Using the Johanna Briggs Institute (JBI) methodology, we conducted a scoping review of literature published in the English language from 2019 to 2021. Search strategy included specific search terms used to search five online databases: CINAHL, ProQuest, and PubMed and OVID, and Google Scholar. A narrative approach was used to synthesise the identified papers.

Results: 356 papers were retrieved through initial database and hand searches; 260 once duplicates were removed. Close assessment by title, abstract, and full paper using inclusion/exclusion criteria narrowed this to 16 relevant articles.

Conclusions: This review did not assess for quality, however selected studies were themselves emergency responses to COVID-19, conducted in haste, so reviewers deemed the quality of evidence to be impacted by this. They suggest healthcare responses to COVID-19 have been highly disruptive for many student nurses. Studies focused almost entirely on face-to-face traditional nurse learners, with distance learners only mentioned in passing in two papers.

Figure 1

Table 1

<table>
<thead>
<tr>
<th>Search Number</th>
<th>Query</th>
<th>Sort By</th>
<th>Filters</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(&quot;student nurses&quot; or &quot;nursing students&quot;) AND ((&quot;2019/12/01&quot;[Date-Publication]): &quot;3000&quot;[Date-Publication]))</td>
<td>Publication</td>
<td>Abstract, English</td>
<td>2732</td>
</tr>
<tr>
<td>2</td>
<td>(&quot;nursing curriculum&quot; OR &quot;emergency response&quot;) AND ((&quot;2019/12/01&quot;[Date-Publication]: &quot;3000&quot;[Date-Publication]))</td>
<td>Publication</td>
<td>Date, English</td>
<td>1009</td>
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<tr>
<td>3</td>
<td>(&quot;SARS-COV-2&quot; OR &quot;COVID-19&quot; OR &quot;novel coronavirus&quot; OR &quot;2019-nCov&quot;) AND ((&quot;2019/12/01&quot;[Date-Publication]: &quot;3000&quot;[Date-Publication]))</td>
<td>Publication</td>
<td>Abstract, English</td>
<td>92,393</td>
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* Corresponding author.
Appendix 1. PRISMA flow diagram of screening process

![PRISMA flow diagram](image_url)

Appendix 2. Extraction tables for selected studies

<table>
<thead>
<tr>
<th>Author(s) (Year)</th>
<th>Method and Research Design</th>
<th>Aim of Study</th>
<th>Sample</th>
<th>Key Findings</th>
<th>Nursing Students</th>
<th>Nursing Curriculums</th>
<th>Blended/Distance Learning</th>
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<tbody>
<tr>
<td>Aslan and Pekince [11] Turkey</td>
<td>Quantitative online questionnaire using Perceived Stress Scale (PSS)</td>
<td>To evaluate nursing students' views on the COVID 19 pandemic and their perceived stress levels.</td>
<td>N = 662 Nursing students on F2F courses</td>
<td>The average score on the PSS was 31.69 ± 6.91, indicating that the students had a moderate level of stress. Significant differences in PSS score were found in terms of age and sex (P &lt; .001 and P &lt; .001, respectively). Results indicated that 48% of the students frequently consumed news about the COVID 19 pandemic, and 91.5% followed the developments in other countries. It was determined that 68.1% of students were worried about being infected, and 78.9% thought they took adequate measures against infection.</td>
<td>Age was found to have an effect on the level of stress perceived by the students, and there were statistically significant differences in PSS score between age groups (P &lt; .001). The level of stress perceived by those between the ages of 18 to 20 was higher. There were significant differences in PSS score in terms of sex (P &lt; .001). It was observed that the stress level perceived by female students was higher than that of male students</td>
<td>Not reported</td>
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<tr>
<td>Author(s)</td>
<td>Method and Research Design</td>
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<tr>
<td>Bogassian et al.</td>
<td>Evidence informed editorial</td>
<td>To rapidly consider the value proposition of a number of nursing student options to respond to the COVID-19 crisis and ensure the future of the nursing workforce.</td>
<td>N = 3 senior nursing educators reflecting on disruptions to F2F learning</td>
<td>Challenge in balancing the nursing workforce response to the COVID-19 crisis and maintaining the professional experiences and clinical learning of nursing students to ensure the future of the nursing workforce. 5 options considered: (i) positive perspectives (63.4%) on the nursing profession before the pandemic decreased to 50.6%, whereas the negative (26.7%), and the undecided (9.9%) perspectives increased to 32.3% and 17.1%, of the total respectively.</td>
<td>1. Full retention of the current student workforce on clinical placement. 2. Full cessation of the current student workforce on clinical placement. 3. Modified retention of the current student workforce in clinical placements. <strong>A significant increase was found in the anxiety scores with negative perspectives combined with an unwillingness to practice their profession in the future (P &lt; .05).</strong></td>
<td>Not reported</td>
<td>5. Continuing to provide clinical education of nursing students in alternate clinical environments</td>
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<tr>
<td>Cici and Yilmazel</td>
<td>Mixed methods online questionnaire using State Anxiety Scale and Beck Anxiety Inventory.</td>
<td>To determine the anxiety level of candidate nurses and capture their perspective on the nursing profession in light of the coronavirus disease</td>
<td>N = 322 nursing students on F2F courses</td>
<td>Nursing students responses not distinguished from medical students: 1) fear of 1) infection, 2) transmission to others, and 3) health system breaking down</td>
<td>Pre-graduate training should be provided to candidate nurses about pandemic nursing and professional difficulties they may possibly encounter in infection epidemics.</td>
<td>Not reported</td>
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<tr>
<td>Collado-Bora et al.</td>
<td>Qualitative focus-group interviews</td>
<td>To study the perceptions of medical and nursing students about their voluntary incorporation into the health system caused by COVID-19</td>
<td>N = 29 final year nursing students and n = 33 final year medical students, recruited through convenience sampling, on F2F courses, and 85% of whom reported voluntarily entering the health system during COVID19. n = 145 nursing students, and n = 919 medical students, on F2F courses</td>
<td>Results highlighted two main categories and a total of five subcategories of feelings. The main feelings collected regarding mood were negative, represented by uncertainty, nervousness, and fear.</td>
<td>Nursing student responses not distinguished from medical students: 1) lack of professional knowledge and skills, and 2) poor ability to cope and manage difficult situations</td>
<td>Not reported</td>
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<td>Dutta et al.</td>
<td>Quantitative online questionnaire</td>
<td>To assess the satisfaction level of medical and nursing students during a shift to online teaching</td>
<td>The majority of the students were satisfied (42%) with online learning</td>
<td>There was no significant difference in dissatisfaction levels between medical and nursing students (p = .192).</td>
<td>The maximum satisfaction index (78.23%) was observed with faculties being supportive and responsive in resolving the queries and the minimum (46.39%) was observed with issues related to communication and discussion with peer students.</td>
<td>Online learning is essential at current times but is not an effective alternative for medical and nursing education. Face-to-face classes and practical sessions along with online learning can be a viable option.</td>
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<td>Fitzgerald and Konrad</td>
<td>Qualitative web-based survey</td>
<td>To explore anxiety and stress experienced by first semester nursing students and identify sources of support during a transition from a face to face to an online learning platform during the first months of the COVID 19 pandemic.</td>
<td>n = 50 nursing students on F2F courses, two months after the completion of their first semester</td>
<td>The most commonly reported symptoms were difficulty concentrating (90%) and feeling anxious or overwhelmed (84%). Most respondents reported anxiety related to the pandemic, with 84% being concerned about a friend or relative contracting COVID 19, and with 70% fearful of becoming infected themselves.</td>
<td>The majority of respondents expressed concerns related to difficulty handling academic workload (62%), and the need to perform well in school (56%).</td>
<td>Transition from a face to face to an online learning platform during the first months of the COVID 19 pandemic.</td>
<td>To decrease anxiety and stress, the faculty should foster a structured learning environment; abide by the course schedule; communicate changes or updates in a timely fashion; adapt assignments to fit the learning environment; utilize campus, local, state, and national resources; practice self-care; and extend grace.</td>
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<tr>
<td>Gagne et al.</td>
<td>Qualitative analysis of tweets on Twitter by nursing students</td>
<td>To explore the nature and content of tweets posted by nursing students</td>
<td>N = 95 self-identified nursing students posting 8856 tweets from their Twitter accounts in the United Kingdom, the United States, and South Korea during the COVID-19 pandemic between</td>
<td>The findings revealed five categories of tweet content: (i) reactions to COVID-19; (ii) everyday life; (iii) role as a student; (iv) social connections; and (v) socio-political issues.</td>
<td>All groups described stress and anxiety related to the uncertainty caused by the pandemic while attempting to maintain humour and positivity. Students talked about their schoolwork, the high burden of</td>
<td>The findings can inform nurse educators to better understand their students’ responses to and sentiments about the COVID-19 pandemic. Nurse educators should incorporate this understanding into</td>
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<td>Olum et al.</td>
<td>Quantitative online questionnaire</td>
<td>To explore how online learning platforms to support medical education in low resource settings</td>
<td>N = 49 nursing students and n = 165 medical students on F2F courses</td>
<td>Only 57 (26.6%) respondents had access to high or very high-quality internet access. Internet costs and poor internet connectivity were the most important barriers to e-learning reported by 199 (93%) and 179 (84%) students, respectively.</td>
<td>About half (n = 104, 49%) of the students believed that e-learning reduces the quality of knowledge attained and is not an efficient method of teaching. Monthly income (P = .006), internet connectivity quality (P &lt; .001), computer ownership (P = .015) and frequency of usage of academic websites or applications (P = .006) significantly affected attitudes towards e-learning.</td>
<td>Sensitization and training of students and faculty on e-learning and use of existing learning platforms are important to improve the attitude and use of e-learning.</td>
<td>Blended online and use of offline downloadable learning materials would overcome the challenges related to the variable quality of internet access in the country.</td>
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<td>Garcia- Gonzalez et al. [15]</td>
<td>Quantitative online questionnaire using Spielberger State-Trait Anxiety Inventory (STAI)</td>
<td>To analyze state-trait anxiety levels of nursing students because of e-learning during two periods of the COVID-19 confinement</td>
<td>N = 460 nursing students on F2F courses completing the questionnaire twice (weeks 1 &amp; 4 of covid confinement)</td>
<td>Total anxiety levels increased in the fourth week as compared to the first week (first week: 50.4 ± 20.8 and fourth week: 59.9 ± 10.6 (p &lt; .001)).</td>
<td>Significant predictors for STAI anxiety in nursing students were being in the last year of the degree program, being female, and spending confinement in a house without a garden.</td>
<td>Shift to e-learning</td>
<td>The sudden shift to exclusive e-learning instructional methods has raised anxiety levels in nursing students, especially those in their last academic year.</td>
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<tr>
<td>Gomez Ibanez et al. [16]</td>
<td>Qualitative interview using Colizzi’s method</td>
<td>To clarify the experiences of final-year nursing students employed to provide nursing care during the COVID-19 pandemic in Spain</td>
<td>N = 20 final-year nursing students on F2F courses</td>
<td>Participants described being called for nursing duty in a pandemic situation while being final-year nursing students as a two-sided experience: one stressful, due to the unknown and fear; the other fulfilling, due to satisfying their need to serve the sick.</td>
<td>Students felt a commitment to society, the profession, and individuals in the fight against COVID-19. Their commitment led to sacrifices, such as consolidating their studies and exposing themselves to potential contagion; these circumstances created feelings of immense social pressure.</td>
<td>Nursing education programs in Spain should include training in managing complex situations, placing significant emphasis on decision-making under pressure to increase preparedness for pandemic response.</td>
<td>Not reported</td>
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<td>Langelgard et al. [3]</td>
<td>Qualitative focus group interviews followed by an online questionnaire</td>
<td>To describe and evaluate nursing students’ experiences of the pedagogical transition from traditional campus-based learning to distance learning using digital tools.</td>
<td>Nursing students on F2F courses recruited for focus groups (n = 9) and an online questionnaire (n = 96)</td>
<td>The analysis of the focus group interviews extracted three main dimensions: didactic aspects of digital teaching, study environment, and students’ own resources. Social interaction was an overall theme included in all three dimensions. 67% of students preferred campus lectures to distance learning with digital tools. 33% preferred distance learning with digital tools to campus lectures.</td>
<td>It is important to provide training to students and teachers as an important part of the students’ learning process.</td>
<td>This study highlighted the importance of social interactions among students and between students and faculty on blended learning.</td>
<td>Results support a blended learning approach, including both campus based and distance learning, which may offer pedagogical benefits, including important social interactions that amplify students’ learning process and motivation.</td>
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<td>Lovric et al. [4]</td>
<td>Qualitative web-based survey</td>
<td>To explore how nursing students perceive the COVID-19 crisis and what their personal experiences were while studying during the global pandemic</td>
<td>N = 33 BSc nursing students, on a F2F course</td>
<td>The results indicate students have somewhat divided opinions about the effectiveness of state institutions and their information policies in Croatia.</td>
<td>Participants focused on their perceptions on the efficiency of state institutions and the behavior of the population during the COVID-19 crisis. 21 believed state institutions acted effectively to control the population, and 12 did not.</td>
<td>Mild fear of becoming infected in the classroom [5]. Severe fear of becoming infected in the clinical setting [6]. Learning difficulties due to impact of COVID-19 [13].</td>
<td>Satisfaction with distance learning [7].</td>
</tr>
</tbody>
</table>
CRediT author statement

Naomi A Watson: Conceptualization, methodology, writing, editing, reviewing.
Joseph De-Lappe: Conceptualisation; funding acquisition, project administration; Resources; Supervision; writing-review & editing.

Data availability

Data will be made available on request.

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Declarations of interest

The authors declare that they have no known competing financial inter-
ests or personal relationships that could have appeared to influence
the work reported in this paper.

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Further reading

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Dr. Joseph De-Lappe is Research Associate in the Faculty of WELS.