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

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ABSTRACT

Keywords: Student nurses Nursing curriculums E-learning Covid-19 Emergency healthcare responses

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 Joanna 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 synthesize 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.

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Science Talks 6 (2023) 100211

http://dx.doi.org/10.1016/j.sctalk.2023.100211

Received 30 January 2023; Accepted 27 March 2023

Available online xxxx

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Appendix 1. PRISMA flow diagram of screening process

Appendix 2. Extraction tables for selected studies

<table>
<thead>
<tr>
<th>Author(s) (Year)</th>
<th>Country</th>
<th>Method and Research Design</th>
<th>Aim of Study</th>
<th>Sample</th>
<th>Key Findings</th>
<th>Nursing Students</th>
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<th>Blended/Distance Learning</th>
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</thead>
<tbody>
<tr>
<td>Aslan and Pekince [11]</td>
<td>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. 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>
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<td>Author(s)</td>
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<td>Bogassian et al. [1] Australia</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 for 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. A significant increase was found in the anxiety scores with negative perspectives combined with an unwillingness to practice their profession in the future ($P &lt; .05$).</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>
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<tr>
<td>Cici and Yilmaz [19] Turkey</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: fear of 1) infection, 2) transmission to others, and 3) health system breaking down.</td>
<td>Nursing student responses not distinguished from medical students: 1) lack of professional knowledge and skills, and 2) fear of future disruptions.</td>
<td>Not reported</td>
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<td>Collado-Bora et al. [12] Spain</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 COVID-19 $n = 145$ 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>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>Dutta et al. [2] India</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 dissatisfied (42%) with online learning.</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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<td>Fitzgerald and Konrad [13] USA</td>
<td>Qualitative web-based survey</td>
<td>To explore anxiety and stress experienced by first semester nursing students, 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>All groups described stress and anxiety related to the uncertainty caused by the pandemic while attempting to maintain humour and positivity.</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 their teaching.</td>
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<td>Gagne et al. [14] USA</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>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 their teaching.</td>
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<tr>
<th>Study</th>
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<tr>
<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 the COVID-19 pandemic in Spain</td>
<td>( N = 460 ) nursing students on F2F courses completing the questionnaire twice (weeks 1 &amp; 4 of COVID-19 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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<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>
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<td>Langevård 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</td>
<td>67% of students preferred campus lectures to distance learning with digital tools. 33% students preferred distance learning with digital tools to campus lectures</td>
<td>This study highlighted the importance of social interactions among students and between students and teachers as an important part of the students’ learning process</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 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>
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<tr>
<td>Olum et al. [8]</td>
<td>Quantitative online questionnaire</td>
<td>The plausibility of 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>Ramos-Morcillo et al. [17] Spain</td>
<td>Semi-structured interviews using COREQ checklist</td>
<td>To discover the learning experiences and the expectations about the changes in education, in light of the abrupt change from face-to-face to e-learning education, of nursing students</td>
<td>N = 32 nursing students on F2F courses</td>
<td>The imposition of e-learning sets limitations for older students, those who live in rural areas, with work and family responsibilities and with limited electronic resources</td>
<td>Participants indicated the situation affects their future plans and expectations related with obtaining their degree and work. They believe that they can be singled out for missing education, their international training is paralyzed, and they are afraid</td>
<td>Online teaching has allowed substituting the teaching of theory, although face-to-face teaching is preferred, at the same time it has shown that clinical practices are indispensable for the training of the nursing students.</td>
<td>Online education goes beyond a continuation of the face-to-face classes.</td>
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<td>Ulenaers et al. [18] Belgium</td>
<td>Quantitative cross-sectional online questionnaire</td>
<td>To study nursing students' experiences during clinical placement during the COVID-19 pandemic</td>
<td>N = 665 nursing students on F2F courses</td>
<td>The COVID-19 pandemic had a noticeable impact on the experience of nursing students, ranging from organisational changes, uncertainty about their own competences, and even fundamental doubts about continuing their education.</td>
<td>When asked what COVID-19 situation meant for their learning experience, 52.63% of students (n = 350) stated that they experienced this situation as an enriching experience within their training, 19.85% of students (n = 132) as a limitation, and the remaining part was neutral (27.52%, n = 183)</td>
<td>Students were frustrated about the school's expectations towards their learning objectives during clinical placement as they often experienced fewer learning opportunities</td>
<td>Not reported</td>
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<td>Usher et al. [9] Australia</td>
<td>Evidence informed editorial</td>
<td>To reflect on The mental health impact of COVID-19 on pre-registration nursing students in Australia</td>
<td>N = 5 senior nursing educators reflecting on disruptions to F2F learning</td>
<td>We raise concerns about the long period of social disruption students have and are experiencing, and the effects of this on their short- and longer-term mental health outcomes.</td>
<td>Attending classes and other study-related activities are important aspects of life for students and for many students, the routine associated with university activities is a way of coping as well as a way of staying connected with classmates, friends, and teachers</td>
<td>Nursing faculty and schools adopt measures to actively assist students during this pandemic (illustrated with a table of measures and suggestions to actively assist students)</td>
<td>Many students choose to attend on-campus classes rather than enrol in online units due to their personal learning styles, the ability of face-to-face learning to meet any of their special needs, or to have regular access to peer support.</td>
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<td>Webster [10] UK</td>
<td>Qualitative web based survey</td>
<td>To explore the experience of student nurses who opted out of frontline care during COVID-19</td>
<td>N = 198 nursing students who could not or would not accept the offer of a paid placement</td>
<td>People should not assume students are opting out for their own or a family member's health reasons. Their choice might be based on their values, beliefs and opinions on the matter. The survey shows that the majority of students who chose to opt out have had a negative experience.</td>
<td>Students felt pressure from their peers (53%) and pressure from their institutions (48%) regarding their choices. 72% indicated that peer and institutional pressure did not affect their choice, while 28% indicated it did.</td>
<td>31% of students felt very unprepared for the nursing program going forward (AV: 2.36 out of five where 1 = very unprepared, 5 = very prepared)</td>
<td>Not reported</td>
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**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.

**Acknowledgments**

Dr. Geraldine Boyle and Dr. Elizabeth Tilley for helpful review feedback.
Dr. Ute Manecke, for librarian support.
Will Murcott, for helpful comments on methodology.

**Funding**

Funding for the research assistant conducting the database search was provided by The Open University.
Declaration of interests

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

References


Further reading

Dr. Naomi Anna Watson is Senior Lecturer in Nursing and Deputy Associate Dean, teaching Excellence, The Open University, in the Faculty of Wellbeing, Education and Language studies (WELS).

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