



## Research article

# The listening project: A qualitative study on the experiences of pre-registered nurses during the Covid-19 pandemic in Scotland

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## ABSTRACT

**Background:** During the COVID 19 pandemic academic institutes worldwide were forced to shift to online or socially distanced learning. Nursing students faced unique challenges due to the limited practical learning environment and removal of supernumerary status to meet increased pressure on health care resources.

**Aim:** To explore the experiences and perceptions of pre-registered nurses in relation to their university education during the COVID-19 pandemic.

**Methods:** Underpinned by Lizzio (2006) [1] five senses of student success model, a novel qualitative approach using peer-to-peer discussion was utilized to explore the experiences of pre-registered nurses during the COVID-19 pandemic. Students who were on their second and final year in the nursing program were invited to participate. Interviews were conducted and transcribed using an online meeting platform. Data were analyzed using the five main stages of framework analysis.

**Results:** Eleven peer-to-peer discussion with 22 students were conducted. The five themes were linked with the five senses student success model: capability, connectedness, purpose, resourcefulness, and culture. Six sub-themes emerged in the data: confidence and learning process, building relationships, communication, student as health professional and mental health consequences of COVID-19 pandemic.

**Conclusion:** Whilst there was strength in university provision, the pandemic was an opportunity for students and academics to reflect and learn about how to further programme resilience and enhance student support processes. We recommend that nursing programmes should include concepts of transition, pandemic preparedness, collaboration with professional partners, and provision of catch-up sessions to analyse gaps on their skills and knowledge.

## 1. Introduction and background of the study

COVID-19 was declared by the World Health Organization (WHO) as a global pandemic in March 2020, causing an unprecedented global health crisis [2]. The rapid increase in the number of infections and deaths worldwide resulted in governments partially or fully closing public places and business establishments, implementing travel restrictions and isolation, and suspending face-to-face education [3,4].

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In the United Kingdom, universities delivering nursing programmes suspended all but mandatory simulation workshops, and all teaching was transferred to online [5]. The Nursing and Midwifery Council (NMC) implemented temporary emergency educational standards which deployed second and third year nursing students the option to support the healthcare workforce in clinical practice whilst maintaining their student status [6]. Consequently, uncertainties on course progression, future career as registered nurses as well as mental health consequences were evident [7,8].

While some students perceived their contribution as benevolent, research reported students facing difficulty retaining information and motivation [9], a study of 244 students in India reported moderate stress in 61.4% of respondents and put pressure on nursing resources [10]. Stress was not only relating to the shift to online academic work but also attributed to challenges relating to acquisition of necessary skills and competencies for safe transition to registration [11]. Findings from a survey conducted by [12] with Spanish nursing (n = 58) and medical students (n = 44) during the COVID-19 pandemic revealed that 65.3% of the total sample believed they were not prepared or barely prepared to provide care to COVID-19 patients. Insufficient preparation and the lack of personal protective equipment (PPE) was an additional and significant stressor for students during this pandemic [13–15].

Given the learning from the COVID-19 pandemic is ongoing, many knowledge gaps exist on the implications for future pre-registration nursing student. A robust and in-depth analysis of their experiences during the pandemic provide a valuable insight into the impact of the crisis on their learning, contribute to building a resilient nursing curriculum, and organizing resources and human infrastructure in clinical practice [8]. The objectives of the study were: (1) to explore the experiences and perceptions of student nurses on their university education during the COVID-19 pandemic through a qualitative approach using peer-to-peer discussion, (2) to relate these experiences to the five senses of student success model, and (3) to explore and conceptualize ways to support students during a pandemic.

## 2. Methodology

To meet the objective of the study [1]’s five senses of student success framework (Fig. 1 [16]) provided the theoretical underpinning. It purports that the student’s ability to adjust and adapt to the transition and academic demands plays a significant role in the student’s success in the university [17]. It was used because of its focus on university transition experience, student outcomes across their university education, and previous application to midwifery educational research [18]. A novel qualitative peer-to-peer discussion approach was adopted to collect data which gave students to talk candidly and discursively about their experience. Ethical approval of the study was granted by the University ethics committee. Data collection took place between August and October 2021 and oral informed consent was obtained prior the discussion.

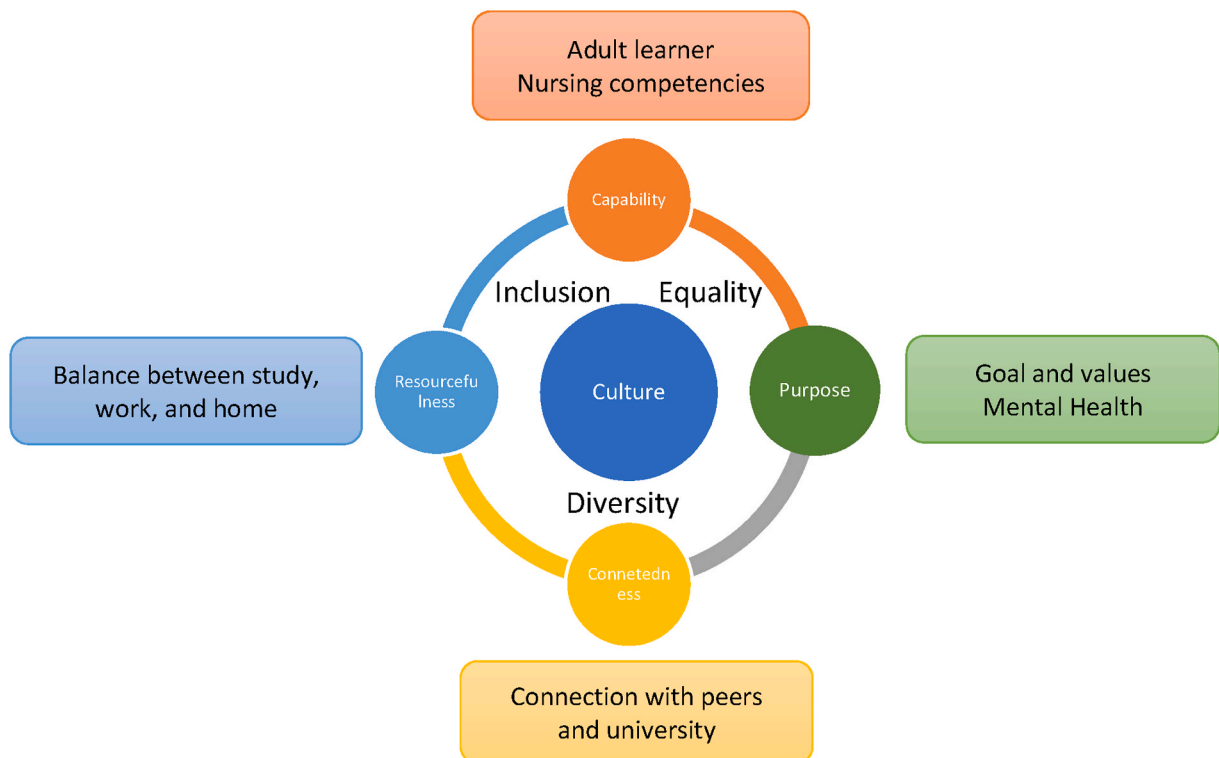


Fig. 1. Five Senses of Student Success Model [16]

### 2.1. Researchers and reflexivity

Two female researchers participated in this study, an MSc nursing student (KC) with no direct relationship with the students and a nursing academic (RP) who supervised the project. Positioning of the researchers were established prior commencing the study through discussions of the study methodology and motivation to conduct the study.

### 2.2. Study setting and participants

The study was conducted at Edinburgh Napier University (ENU), one of the largest midwifery and nursing education providers in Scotland. Prior to the pandemic the students had a blended approach to their learning with majority of teachings were face-to-face or in placement. During the lockdown there was a rapid transition to online learning that lasted for 19 months, with a gradual introduction to face-to-face learning from September 2021. A purposive sample from the 2nd year and 3rd year nursing students of ENU were recruited because of their recent exposure to COVID-19 lockdown and capture a range and diversity of experiences and perceptions. Participant numbers were determined by data saturation, where no new data or themes emerged.

### 2.3. Data collection

Students were recruited through their programme virtual learning environment and those who expressed interest were provided with information of the study, privacy notice, copy of consent form, and topic guide (Table 1) aligned to the five senses of student success model to collect data. Participants were encouraged to invite their friends or other classmates to form the pairs of peer discussion or participants are paired based on their level of education. Discussions were conducted between the students and moderated by the researcher via an online platform with a duration of 45–120 min. All discussions were audio/visually recorded. Field notes were collected to note participants' behaviour and the researcher's personal reflections of the methodological aspects of data collection. On completion of the interview a debrief form was sent to the participants and data were anonymized. Students were allocated 10 practice hours to account for participation and verification of the transcripts.

### 2.4. Data analysis

Transcripts were anonymized and were uploaded to NVivo software release 1.5.1. Analysis using 5 stages of framework analysis method was used including (1) familiarization, (2) identifying thematic framework (underpinned by the 5 senses model), (3) indexing, (4) charting, (5) mapping and interpretation [19]. The transcripts and the findings were reviewed by the participants and verified by research supervisor (RP) to ensure that themes were credible and reliable in the context of the data presented.

## 3. Results

A total of 11 peer to peer discussion with 22 students (20 females and 2 males) were conducted. Discussions were 37–120 min in duration. Fourteen third year and 8 second year students were recruited from Adult, Child Health, Mental Health, and Learning Disabilities fields of practice. Lizzio's framework was aligned to six sub-themes: confidence and learning process, building relationships, communication, student as health professional and mental health consequences of COVID-19 pandemic (Table 2).

### 3.1. Theme 1: capability

#### a. Confidence

Almost all students (n = 16) reported that not having practical skills and time to practice compromised their confidence and readiness for clinical practice. The students reported low confidence in transferring theoretical knowledge provided online to clinical practice and this was particularly evident with less experienced students.

*... when it came to the skills class, I think that was definitely lacking ... I would not be confident doing IM or an IV or not IV subcutaneous injection just from looking at a video. (P18, T9).*

Participants on placement reported exposure to valuable learning opportunities and the opportunity to perform tasks previously not within a student nurses' remit.

**Table 1**

Interview topic guide.

1	During the lockdowns, your role as a student and studies have been affected, can you reflect on what this has meant for you?
2	The shift to online learning has changed how we communicate with our university community (peers and academics). Can you reflect on how this has affected your relationship with peers and as a university student?
3	How do you perceive your identity as a student health professional?
4	Has the pandemic affected your mental health in anyway?
5	There has been a blurring of home, professional and student life during this time- can you talk us through what this has meant for you?
6	What has the university experience over the last year meant to you in terms of equality, diversity, and inclusion?

**Table 2**  
Themes and subthemes.

Themes	Sub-themes	Definition and description
<b>Capability</b>	Confidence Learning Barriers	Refers to student's ability to understand their student role and mastering of academic knowledge and practical clinical skills that enables them to adapt, be flexible and move beyond competency.
<b>Connectedness</b>	Building relationships Communication	Refers to the students' sense of belongingness, integration, building and satisfaction with their relationship to their peers and the institution that may influence the student commitment towards their education.
<b>Purpose</b>	Student as Health Professional Mental Health consequences of COVID-19 pandemic	Refers to the students' ability to develop realistic goals, a sense of vocation, and engage with the discipline, which helps them to be focus and motivated in pursuing and attaining goals
<b>Resourcefulness</b>		The ability and willingness of the student to learn in different and possible ways to navigate university system and ability to access and use available resources to achieve goals and outcomes of learning.
<b>Culture</b>		Refers to the ability of the student to understand inclusion, diversity, and equality that enable them to develop personal and professional identity to become productive, develop talents, and maximize strengths.

... I know it sounds bad because of how many staff are off I had to step up, so I got that opportunity and my confidence when I leave second year was on high. (P5, T3).

#### b. Learning Process

Students reported the ability to re-listen to recorded lectures, learn at their own pace, and reduce travel time and cost as positive: ... it was flexible so you could do it in it you could do it whenever throughout the day (P21, T10). However, interactive learning and teaching time were often replaced with pastoral care and dealing with technical issues, for example, taking exams, or submitting assignments. A common response reported, ... 'cause a lot of the time we were goin' on online calls and here be like 2 s I'm having technical issues ... and then as even as the time where you should be learning (P7, T4)

### 3.2. Theme 2: connectedness

#### a. Building relationships

The pandemic had a negative impact on social aspects of university life and connections and relationships with students and staff were compromised.

*It's not being massively easier to sort of connect with the wider year group ... I literally don't know their names ... I don't know who they are ... It was quite hard to form, especially quick, close relationships and friendships in that situation (P20, T11).*

#### b. Communication

Use of social media platforms enhanced peer-to-peer interactions, but challenges associated with conflicting information, following discussion threads or interruptions due to numerous notifications were frequently reported. Unanswered or delayed email responses as well as difficulty of asking questions in online classes, forums was also reported as a frustration.

*... with [social media app} groups and things, you feel a bit lost in the conversation. Sometimes you know you ask a question and then ten other people have put something else up so your questions gone by then. (P9, T4).*

### 3.3. Theme 3: purpose

#### a. Student as a Health Professional

Students who opted-in to clinical placement reported a sense of belonging. Being trusted with responsibilities made them feel like a registered nurse, valued, useful, and respected. One student reflected that they felt:

*Valued and useful ... that was nice just to sort of valued, you felt part of the team. I felt like you were helping in the bigger sense of things (P1, T1).*

#### b. Mental health consequences of COVID-19 pandemic

With the transition to online learning and cancellation of clinical practice, the students reported anxiety associated with course progression. A common comment was:

*... we were worried that you were going to be pushed back a year as well 'cause you didn't know if you were going to be like complete hours in that as well. (P8, T4).*

Some positive outcomes were also reported such as improvement of resilience, motivation, new coping activities, and opportunity to focus on personal growth and development.

*“I think the pandemic has made me more resilient” (P12, T6)*

### 3.4. Theme 4: resourcefulness

Students reported receiving great support from the university and easy access to the virtual learning space, which help them to easily adapt with distance learning: *“I really actually like using [Virtual learning space]. I think it's very handy and it's very easy to access and all the workbooks ... (P22, T10)*. Meanwhile, separating responsibility in school and at home was challenging, especially those with caring responsibilities. Having mobile phones and family members around created distractions and disturbances during online classes.

*... a lot of people were like joining in from home and there's kids running about or their dogs coming in an hour or ... delivery at the door or, you know we've got stuff going on. (P1, T1).*

### 3.5. Theme 5: culture

All students (n = 22) discussed their experiences as positive and inclusive, particularly from the support they've received when they felt vulnerable or required additional resources to continue learning.

*You know, the laptop that I received was top grades. I was given a voice recorder to help with the recording, tutorials and lectures and stuff ... it was a great a great service and they've been in touch with me throughout my time at university. (P2, T1).*

Year two students reported feeling disadvantaged. A student reported, *I feel like the university focus more on like the first years and then like it was like the third years as well like we were always like left out in the middle ... well they're more of a priority because they've just started then obviously it's a lot harder for them or their qualifying (P7, T4)*

(Note: P = participant, T = transcript).

## 4. Discussion

This study is the first to use peer discussion methodology to carry out an in-depth exploration of nursing student's experiences of learning during the COVID-19 pandemic. Application of the 5 senses of student success framework has provided an insight into the key factors that are important to the university students experience and what this means when preparing for professional nursing practice.

A key strength of this study was the use of peer to peer methodology which provided a comfortable environment and protected space for the students to speak candidly. Participants were encouraged to be active in the discussion that enable free-flowing information even with difficult topics [20]. Students were able to identify gaps in the knowledge, learn from the insights, construct new information, and common representation of the event [21]. Some limitations to the methodology, which are similar to focus groups, were one participant may dominate the discussion, or both are passive. In our study, this was minimized by providing the topics in advance to encourage them to write down ideas before the discussion [22]. Anxiety and uncertainties could also be encountered with the differences in experiences and ideas between the participants [23]. The presence of a researcher during the conversation reduced uncertainty and provided the opportunity to capture lived experiences, feelings, and emotions, adding to the meaning and depth of the conversation [24].

Capability is one of the most important factors for students' success in education [25]. Student's transition to higher education can be challenging because of the need to adjust and adapt to the university ways of learning, academic workloads, and meeting academic standards and expectations [26]. In our study, similar to previous studies [27–29]; S. [30], students' perceived technology as positive due to the flexibility of recorded lectures, however, recurrent technological issues, limited class discussions, access to resources (e.g., laptop and Wi-Fi), reduced opportunities for learning practical skills, and clinical mentorship compromised quality of learning and jeopardised their transition to professional registration. The students on distance learning reported difficulties in applying theoretical knowledge to the clinical areas while participants who opted-in to paid clinical practice had an increased level of confidence because of the different task given to them, a finding consistent with other studies [31,32], where exposure to the real clinical environment prepared them for future employment. This implies that the value of experience and exposure to real clinical environment is an essential factor in developing confidence for student nurses to be effective and innovative in providing patient care [33].

To mitigate the risk of non-progression and to optimise student engagement during the pandemic, core skills resources, one to one advice, and peer learning were provided. Catch up sessions, closely working with practice areas and practitioners provided a space to identify and analyse specific knowledge and skills gaps and areas where they need further support. Student's experience in practice during the pandemic combined with a flexible approach to theory resulted in over 50% of ENU student nurses completed their programme a month ahead of schedule. This reflects the resilience of the students as well as effectiveness of the changes in the programme.

Students' success in their education depends on their sense of connectedness and sense of belonging. A student with strong sense of connection is more likely to have high level of motivation, enjoyment, and success in learning [34]. The lack of in-person activities in the university posed difficulties in building new relationships for students. Social media group chats and emails helped them maintained connection, although, some reported difficulties in keeping up with the conversation, asking questions, and delayed email responses or no response from academic staffs as frustration. Previous studies also reported deteriorating relationships between students and academic staffs due to unanswered emails, lack of office hours, missing feedbacks, difficulty of asking questions [27]; D. [35], and unhelpful faculty during the pandemic [36]. At the university where the study took place, connectedness was a key initiative

during the pandemic, necessary platforms such as Teams, instant messaging, discussion boards, face-to-face sessions, and “ask me anything” peer support system provided opportunity to raise questions and reconnect. On reflection, good communication and interaction with peers and academic staffs is an essential element for the student’s motivation, satisfaction, overcoming barriers, and achieving academic success during the pandemic [37]. The occurrence of a health pandemic is unpredictable, and nothing could have prepared anyone for the crisis, but the experience could lead to a better, prepared, and positive developments for similar situations in the future. The shift to distance learning combined with changing family dynamics, increased workloads, and uncertainties have significantly caused physical stress and anxiety to the students. According to previous research, nursing students experience stress even in normal circumstances, commonly attributed to fear and uncertainty, working in unfamiliar environment, and clinical knowledge and performance [45]. The findings of this study revealed additional increase in the level of stress among nursing students due to social isolation, increased academic workloads, technical issues, and uncertainties with the course. [38] highlighted mental health consequences of the pandemic could result to loss of motivation and poor academic performance, which can affect student success and retention. However, the students viewed themselves as strong resilient individuals capable of dealing with the challenges of the lockdown. Along same line with previous study [39], students overcome psychological stress, gain clear sense of purpose, and build resilience by having a good family and spiritual support, coping strategies such as gardening, journal writing, reading books, and self-care practice. The study revealed the value and importance of resilience in developing positive perspective and career goals, manage academic workloads, and cope with pressure of study, work, and life. Student resilience may also be attributed to the highly skilled well-being and inclusion team of the university, who provide counselling, mental health support, and disability services to help students maximize their academic potential.

During paid clinical practice, student nurses felt valued in practice and took on the role of a registered nurse which help to bridge the gap between student and registrant. Previous literature reported the willingness of the students to join the workforce during the pandemic [32,40], but also fear the safety of their family, poor learning environment, lack of supervision, and taking different roles, a finding similar to those reported by previous studies [29,41]. [42] highlighted that clinical practice is an important aspect in developing competencies of student nurses where good learning outcomes are highly dependent on the collaboration, supervision, and mentoring support of the staffs. In response to this, a coaching model is currently being piloted where senior students support junior students both in simulated and practice environment. This will increase placement capacity and provide opportunity for the students to observe and learn procedures in their clinical training and meet learning outcomes.

Several students, especially those with caring responsibilities, faced challenges in finding balance between their education and family commitments. Previous studies reported [28]; S [35]. that the shift to online learning resulted to student’s increased responsibility outside of their academic workloads, and concentration problems. Time management and access to resources were reported as essential in overcoming multiple barriers of learning during the pandemic, though it cost them money. This suggest that academic institution should frame support and resources for the students to help students’ financial needs as well as workshops and trainings that could increase student’s skills and competencies to land part-time jobs, keeps them on track, and reduce attrition rates. In response, the university have implemented reasonable mainstreaming adjustment policy where lectures slides are given in advance, lectures are recorded, and online assessments. A digital support partnership project was launched to provide students access to laptop and digital resources thus supporting an equitable learning experience.

A sense of academic culture is demonstrated by a student’s ability to engage in the university environment, being culturally competent [26] and creating a sense of identity as students’ progress to their program [16]. Findings of this study revealed that students perceived the ability to access support services as inclusive in navigating their course, in distance learning, and in clinical training. Although, some students with caring responsibilities reported the lack of consideration on their personal circumstances and being left out during the transition to online learning. This suggests that further adjustments from academics should be based on individual needs to achieve full potential, promote empowerment, and strengthens positive learning experience and motivation while ensuring social inclusion and connection [43].

#### 4.1. Strengths and limitations of the study

Among the limitations, the study was conducted in one department of a university in Scotland, thus the results may be different from other institution. Data collection was online which may limit personal interactions between the participants and the researchers, however, the researcher requested that cameras were on during the interview and fieldnotes were taken. Data analysis and transcription was much more efficient using an online platform which may facilitate larger scale, global qualitative research in the future.

A key strength of this study was the used of novel qualitative approach underpinned by theory to gather data. Peer-to-peer discussion facilitated by a researcher was highly effective and fostered authentic and candid responses from participants. Alignment of our results to previous studies further strengthens the application of this approach in future qualitative studies. Furthermore, participant and member checking of the data adds to the strong validity of the analysis. A purposively sampled nursing students with a representative sample of males (10%) from a range of years and fields of practice provided a broad range of views that adds to the transferability and applicability of results to other academic institutions.

This is the first study conducted in Scotland that explored experiences of pre-registered nurses during the Covid-19 pandemic. This study adds to the limited knowledge on the challenges and enablers faced by the students during the pandemic which provides a platform for enhancements to nursing curricula and student support.

## 5. Conclusions

The findings reveal new opportunities of understanding the perspectives and needs of pre-registered nurses during a pandemic. Scottish pre-registered nurses consider the experience of online learning to be challenging but also beneficial in acquiring theoretical knowledge. Students preferred hands-on experiences to ensure proficiency rather than learning with recorded clinical videos. The students rely on technology to stay connected but also acknowledged the missing element of socialization. Anxiety, uncertainty, worries, and stress were common among students brought by the increased academic workloads, different learning environment, lack of socialization, and juggling between university life, work, and family. Nevertheless, reflections from the students provide insights on the development of personal resilience, new coping activities, growth, maturity, and improved adaptability. Fostering a sense of culture that support inclusion, diversity, and equality can sustain the integration, satisfaction, and capability of the student sense of academic success at university.

## Author's contribution

KAC collected data, coding of themes, and prepared draft of manuscript, RP conceptualized methodology, supported qualitative data analysis, supervised the project, revised, and edited manuscript.

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## Ethical Approval

Ethical approval of the study was granted by Edinburgh Napier University School of Health and Social Care Integrity Committee (Ref: 2781763)

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2022.e12664>.  
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