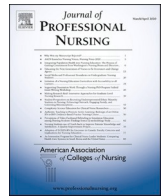


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Item Type	Article
Authors	Giltenane, Martina;Dowling, Maura
Citation	Journal of Professional Nursing 59, pp. 88-99
DOI	https://doi.org/10.1016/j.profnurs.2025.04.013
Publisher	Elsevier
Rights	Attribution-NonCommercial-ShareAlike 4.0 International
Download date	2026-10-24 21:01:51
Item License	http://creativecommons.org/licenses/by-nc-sa/4.0/
Link to Item	https://hdl.handle.net/10344/31238



Nursing and midwifery faculty experience of emergency remote teaching during Covid-19 pandemic: qualitative evidence synthesis

Martina Giltenane^{a,*}, Maura Dowling^b

^a Health Research Institute, School of Nursing & Midwifery, Faculty of EHS, Health Sciences Building, University of Limerick, Limerick, Ireland

^b School of Nursing and Midwifery University of Galway, Ireland

ARTICLE INFO

Keywords:

Nurse and midwife education
Online teaching
Blended teaching
Covid-19
Qualitative evidence synthesis

ABSTRACT

Background: Many universities switched their pedagogical approach to teach remotely during Covid-19 pandemic for the first time, posing many challenges for faculty including technology infrastructure, lack of technical support, a changed teaching environment and more responsibility for supporting students to meet intended learning.

Aim: To Synthesise nursing and midwifery faculty experiences of online teaching during the Covid-19 pandemic.

Method: A systematic review of qualitative evidence was completed to systematically synthesise nursing and midwifery faculty experiences of online teaching during Covid-19 pandemic.

Results: Nine qualitative and three mixed-methods studies reporting on the experiences of 248 faculty were included in this 'best fit' framework using Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education. The importance of face-to-face interaction between faculty and students was highlighted for effective communication and interpersonal relationships. Clinical placement exposure was deemed imperative. Professional development and managerial support are paramount to effectively incorporate the use of online technologies to support nursing and midwifery education.

Conclusions: Clinical placement and practical skills training are essential to be delivered in-person. Face-to-face programmes could be enhanced using online components. Professional development and managerial support, together with collaboration among Higher Educational Institutions, Clinical Practice Partners and Regulatory Bodies is imperative for effective blended programmes.

Introduction

Online teaching is the use of digital tools to deliver teaching content from a distance (Durmaz, Dicle, Cakan, & Cakir, 2012; Giltenane & Dowling, 2023). Blended teaching is 'any combination of face-to-face instruction with technology-mediated instruction, where all participants in the learning process are separated by distance some of the time' (Leidl, Ritchie, & Moslemi, 2020, p.1). In nursing, distance education is available at undergraduate, master, and doctoral levels (de Oliveira et al., 2017; Honkavuo, 2020; Jones, Raynor, & Polyakova-Norwood, 2020). From the early days of online education, educators and scholars have been exploring ways to develop teaching and learning environments, where students can successfully pursue educational goals and feel welcome, safe, encouraged, motivated, and engaged with the subject matter (Jones et al., 2020). Online teaching can improve content delivery in nursing education and its use is advancing rapidly (Bramer, 2020; Huai

et al., 2024; Langegård, Kiani, Nielson, & Svensson, 2021; Tavares et al., 2018; Wu, 2024).

Annand (2011, p. 49), whose research is in the field of distance education, suggests that it is the teacher's actions and attitudes, caring behaviour and subject structure that is "the best prescription for effective online learning." Specifically, effective nursing education and successful student learning are dependent on attention to cognitive, psychomotor, and affective domains of learning (Jones et al., 2020; Mills et al., 2016). Like Annand (2011), Jones et al. (2020) identify that it is the caring nature of lecturers and role modelling that is key for successful student outcomes. Jones et al. (2020) suggest that faculty who role model caring behaviour contribute to the positive formation of future health professionals. Sitzman (2019) agrees that to successfully progress with online education in nursing programmes, faculty must respect, protect and model core caring values while teaching online. However, nursing faculty members who may be confidently conveying

* Corresponding author.

E-mail addresses: Martina.gilteneane@ul.ie (M. Giltenane), maura.dowling@universityofgalway.ie (M. Dowling).

<https://doi.org/10.1016/j.profnurs.2025.04.013>

Received 6 August 2024; Received in revised form 24 April 2025; Accepted 26 April 2025

Available online 2 May 2025

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caring behaviour in the traditional classroom and in the clinical environment where they can engage and interact with students in person can find translating these behaviours to the online environment challenging (Jones et al., 2020; Nabolsi, Abu-Moghli, Khalaf, Zumot, & Suliman, 2021).

In response to the Covid-19 restrictions and to continue education in higher education institutions, universities worldwide were obliged to switch their usual instructional approach from traditional in-person teaching to distance teaching using technology (Carolan, Davies, Crookes, Mcghee, & Roxburgh, 2020; Giltenane & Dowling, 2023; Jackson & Usher, 2022; Langegård et al., 2021). Even though online delivery of nursing education had advanced before Covid-19 (Bramer, 2020; Langegård et al., 2021; Tavares et al., 2018), for some nursing and midwifery faculty, online content delivery during Covid-19 was their first exposure. This transformation to how nursing and midwifery programmes were delivered caused many challenges for nursing and midwifery educators such as the use of new technology without technical support and a changed teaching environment (Carolan et al., 2020; Giltenane & Dowling, 2023; Jackson & Usher, 2022).

While much of the content was forced to be delivered online during the pandemic, de Oliveira et al. (2017) warn that teaching over 20 % of nursing programmes from a distance can diminish the quality of teaching students' professional skills. Limited direct patient contact in developing skills and competencies impedes health professionals' ability to recognize patient needs (de Oliveira et al., 2017; Honkavuo, 2020). However, Tavares et al. (2018) suggest that remote teaching can enhance classroom teaching, improving knowledge exchange, together with autonomy stimulation. The Multimodal Model for Undergraduate Nursing Programmes suggests that 'blending the objectives, activities, and approaches within multiple modalities might be most effective for, and appeal to, a wide range of students' (Picciano, 2017, p. 178). This can be adopted in nursing and midwifery programmes where the most important consideration is that pedagogy informs the approach that will work best to support student learning and achieve intended learning outcomes (Fig. 1) (Giltenane & Dowling, 2023; Picciano, 2017). Giltenane and

Dowling (2023) added special considerations to this model including training, logistical, teacher and resources to enable effective blended teaching approaches within nursing programmes (Fig. 1).

Outside of the pandemic, blended teaching approaches offer many more potential benefits than traditional face-to-face teaching alone (Giltenane & Dowling, 2023; Giltenane & Smith, 2023; Jones et al., 2020; Leidl et al., 2020; Shorey et al., 2022; Tavares et al., 2018; Thirsk, Stahlke, Bryan, Dewart, & Corcoran, 2023; Usher AM et al., 2022). Nurse educators gained much experience providing online education during the pandemic, therefore the fact that many nursing education programmes are reverting to traditional pre-pandemic face-to-face teaching methods requires exploration (Giltenane & Smith, 2023; Ilankoon, Kisokanth, & Warnakulasuriya, 2022). It is worthwhile synthesising nursing and midwifery faculty experience internationally which could provide useful information to guide future nursing curricula developments considering the best teaching methods to deliver the content (Giltenane & Dowling, 2023; Ilankoon et al., 2022; Shorey et al., 2022; Thirsk et al., 2023; Usher AM et al., 2022).

Increasingly it is being considered that efforts to synthesise identifications from separate qualitative studies should inform the knowledge base, as is tradition for quantitative studies (Flemming & Noyes, 2021; Giltenane & Dowling, 2023; Thomas and Harden, 2008). Qualitative evidence synthesis, or QES, 'is a type of systematic review that brings together the findings from primary qualitative research in a systematic way' producing informative data (Flemming & Noyes, 2021, p. 1). The aim is to combine findings and develop new aggregate knowledge (Flemming & Noyes, 2021).

Synthesising qualitative papers that have explored nursing and midwifery faculty's experiences with online teaching during the Covid-19 pandemic will identify faculty's practices, opinions and priorities. This QES will inform the knowledge base and nursing and midwifery educational programmes in the future (Carroll, 2017; Flemming, Booth, Garside, Tuncalp, & Noyes, 2019). Merging international qualitative literature on nursing and midwifery faculty's experiences will inform educational interventions to support faculty deliver educational

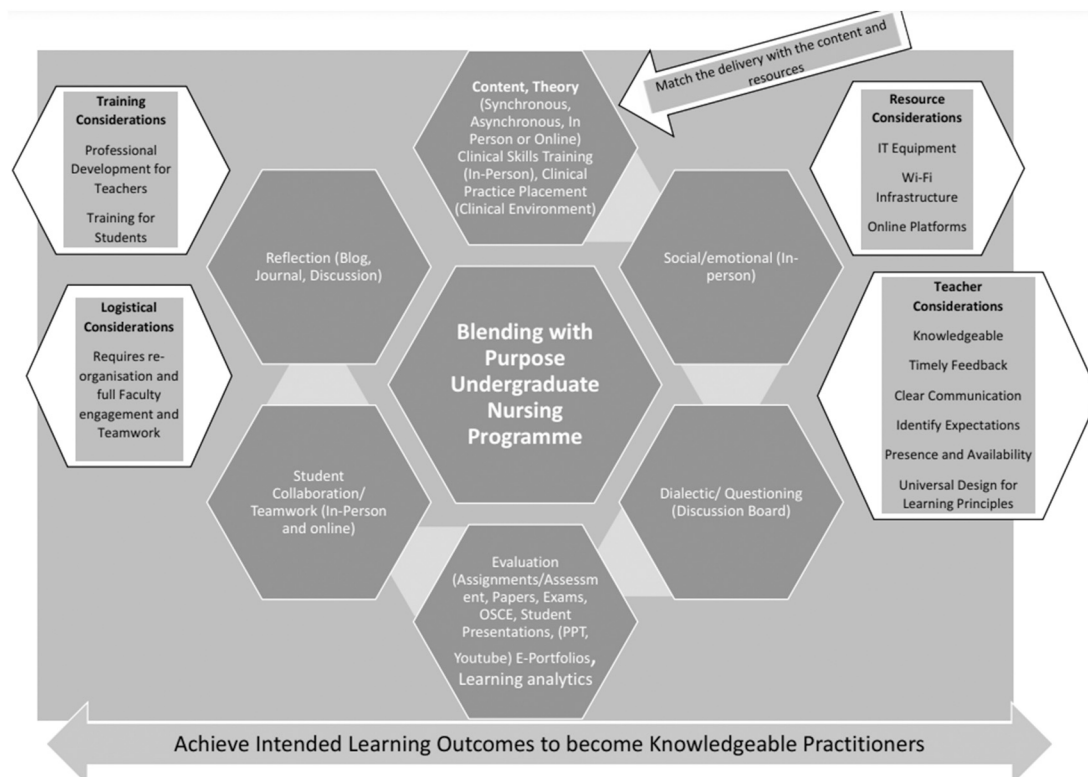


Fig. 1. Blending with purpose: The multimodal model for undergraduate nursing programmes with considerations (Giltenane & Dowling, 2023).

programmes and support students to improve their knowledge using online platforms (Giltenane & Dowling, 2023).

Aim and research question

This review aimed to synthesise recent qualitative research concerning nursing and midwifery online, blended, or distance teaching during the Covid-19 pandemic from a faculty perspective using a QES approach. This study considered qualitative research published since February 2020 during the Covid-19 pandemic to identify faculties' adaptation to online teaching. To address the aim of this research, a research question was formulated using the PICO framework (Population/Patient/Problem, Interest, Context) and the main concepts for the research question was identified (Table 1) (Methley, Campbell, Chew-Graham, McNally, & Cheraghi-Sohi, 2014).

Research question

What are the experiences of nursing and midwifery faculty with online teaching during the Covid-19 pandemic?

Methods

Design

Qualitative Evidence Synthesis (QES) is an umbrella term for all the different approaches associated with the systematic review of qualitative evidence. Through a QES, evidence is synthesized from primary qualitative studies to develop new cumulative knowledge (Flemming & Noyes, 2021; Noyes et al., 2022). The recommended QES methods to produce syntheses are thematic synthesis, framework synthesis, and meta-ethnography (Booth et al., 2018; Flemming et al., 2019; Glenton et al., 2021; Noyes et al., 2019). The approach chosen for this QES was Best Fit Framework Synthesis (BFFS) (Carroll, 2017; Glenton et al., 2021). BFFS blends thematic synthesis with an appropriate framework to methodically organise data into an a priori conceptual framework (Carroll, 2017; Flemming & Noyes, 2021). Chickering and Gamson's (1987, p.2) Seven Principles for Good Practice in Undergraduate Education Framework (Table 2) was used for this review as this was a clear and fitting framework to apply to support synthesis. In line with BFFS for qualitative evidence, data in this review that could not be accommodated in a straightforward way within the framework required considered, iterative interpretation using inductive, thematic analysis techniques (Carroll, 2017). Therefore, some of the a priori themes were reworded to match the thematic synthesis of the findings.

Search methods

Databases including Academic Search Complete, AMED - The Allied and Complementary Medicine Database, CINAHL Complete, ERIC, and MEDLINE with Full Text were searched. The Cochrane Effective Practice and Organisation of Care (EPoC) reporting guidelines were followed (Glenton, Bohren, Downe, Paulsen, & Lewin, 2022). Findings from the search strategy were saved in Endnote and duplicates were removed before uploading to Rayyan, a software programme that operates as an online screening tool (Ouzzani, Hammady, Fedorowicz, & Elmagarmid, 2016) which facilitated housing and screening of the data. As recommended by Noyes et al. (2022) a search for related existing reviews was carried out through Epistemonikos (a database for reviews) and

Table 1
Defining review question.

Population	Nursing and midwifery faculty
Interest	Experience
Context	Online teaching during Covid-19 Pandemic

Table 2
Chickering and Gamson's (1987, p.2) seven principles for good practice in undergraduate education framework (adapted).

Themes for a priori Framework	Revised Themes following Best Fit Framework Synthesis
Encourages Contacts Between Students and Faculty	Encouragement of Student and Faculty Exchange
Develops Reciprocity and Cooperation Among Students	Development of Student Reciprocity and Quality Engagement
Uses Active Learning Techniques	Encouragement of Active Learning
Gives Prompt Feedback	Restricted Feedback
Emphasis Time on Task	Emphasis of Time on Task
Communicates High Expectations	Communication of High Expectations
Respects Diverse Talents and Ways of Learning	Respect for Diverse Talents and Ways of Learning

Cochrane reviews in the Cochrane Library. This was to avoid research waste and duplication effort, to see if an existing review could be updated rather than commencing the review from the beginning, to see if many reviews could be synthesized together, and to learn from others (Noyes et al., 2022). Initially, there were no similar reviews found on Epistemonikos or the Cochrane Library. Later in the process, a second search was conducted, and a similar review by Shorey et al. (2022) including studies published from December 2019 to September 2022 was found. Their review aimed to consolidate the evidence around the experiences of both nursing undergraduates and faculty members navigating through remote and online education during the COVID-19 pandemic. Our review differs in that it only includes faculty members, uses a best-fit framework approach and the database search included studies published up to May 2023.

As recommended by Noyes et al. (2022) and Glenton et al. (2022) a decision was made to only include recognised methods of qualitative data collection such as interviews, focus groups and participant observation, and qualitative data from open-ended questionnaire responses where the data were considered rich enough to include (Flemming et al., 2019). The search string is identified in Table 3 and was adapted accordingly for each database.

Search outcomes, screening and inclusion criteria

Databases were searched in May 2023 and only included articles published since Covid-19 was declared a pandemic. The inclusion and exclusion criteria are identified in Table 4. Two reviewers independently reviewed titles and abstracts of 213 studies. Studies (n = 17) meeting inclusion criteria were included for full-text screening. Any discrepancies were resolved. Two reviewers independently read the full texts and resolved any discrepancies. Twelve studies were included in this review. The screening process and results are presented in Fig. 2 PRISMA Flow Diagram.

Appraisal process, data extraction and data analysis

The 12 included studies were uploaded to NVivo© software for data extraction and synthesis. Both authors independently extracted data. The findings consist of verbatim quotations from study participants and researchers' understandings (Glenton et al., 2022). Only direct participant quotes were extracted from the included papers and included in the data analysis, forming new themes within an a priori framework Chickering and Gamson's (1987, p.2) Seven Principles for Good Practice in Undergraduate Education Framework (Carroll, 2017; Flemming et al., 2019; Glenton et al., 2022) and was used to better understand the phenomenon of interest (Carroll, 2017).

To preserve the context of the primary study data during the extraction and synthesis process and to prevent misinterpretation of primary studies (Noyes et al., 2019), detailed contextual and methodological information on each study is reported in a table of

Table 3
Search string.

"Covid-19" OR "Pandemic" OR "Coronavirus" OR "SARS-COV-2" AND "Nurs* faculty" OR "midwifery faculty" OR "Nurs* lecturer" OR "Midwife Lecturer" OR "Nurs* University Teacher" OR "Midwife University Teacher" OR "Nurs* Tutor" OR "Midwife Tutor" AND "experience" OR "view" OR "perspective" OR "perception" OR "attitude" AND "qualitative" OR "mixed method*" OR "focus group*" OR "interview*" OR "observation*" OR "phenomen*" OR "grounded theory*" OR "ethnograph*" OR "lifeworld" OR "conversation analysis" OR action research OR hermeneutic OR narrative OR content analysis OR colaizzi* OR "Heidegger" OR "van Manen" OR "Husserl" OR "questionnaire"

Table 4
Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
• Studies in English. • Qualitative and/or mixed method studies (interviews, direct observation, focus groups, participation action research, grounded theory, phenomenology, ethnography, content analysis, thematic analysis, narrative analysis, generic qualitative studies) • Primary data to include nursing or midwifery faculty' experiences or perceptions of online teaching, blended or distance teaching during Covid-19 Pandemic. • Studies published between February 2020 and 4th May 2023.	• Studies not written in the English Language • Quantitative studies • Primary data that does not include nursing or midwifery faculty' experiences or perceptions of online teaching, blended or distance teaching during Covid-19 Pandemic. • Studies published before February 2020 (before the Covid-19 pandemic)

'Characteristics of included studies' (Table 5) as is recommended as best practice (Glenton et al., 2022).

Assessment of methodological limitations was undertaken using the Assessment of Methodological Limitations-EPOC Guidelines (Modified Critical Appraisal Skills Programme (CASP) qualitative assessment tool) (CASP, 2018; Glenton et al., 2022) and presented in Table 6. There were mainly no concerns with the included studies' validity, results, and relevance, however, researcher reflexivity was not apparent or unclear in most studies (n = 10) (Table 6). Where reflexivity was not considered, it reduced the quality rating of the paper as reflexivity is a key consideration for qualitative empirical research (Flemming & Noyes, 2021). Assessment of confidence in the overall findings was undertaken using four criteria: methodological limitations, coherence, relevance, and adequacy as outlined in GRADE CERQual (Lewin et al., 2018) and were mainly ranked high confidence (See Supplementary File 1).

Reflexivity statement

Researcher reflexivity is central when undertaking a QES (Flemming & Noyes, 2021) and as recommended by many (Flemming & Noyes, 2021; Glenton et al., 2022; Haigh & Withell, 2020). A reflexive stance was maintained throughout all stages of the review process, from study selection to data synthesis. Both authors are experienced nurse educators with experience of teaching online during the Covid-19 pandemic, have clinical backgrounds in nursing, and collectively have extensive experience in undertaking qualitative evidence syntheses. Authors engaged in discussion when selecting the study sample, agreeing the a priori 'best fit' framework, and analysing and synthesising the findings. Progress was reviewed regularly, and decisions made explored critically. The first author also has experience of online learning during the Covid-19 pandemic. Authors were mindful of presuppositions to minimise the risk of our collective and individual experiences skewing the analysis or the interpretation of the findings. A reflexive journal was kept throughout the review process documenting and reflecting on progress and decisions made.

Results

Overview of included papers

This review included seven qualitative descriptive studies, two phenomenological studies and three mixed methods studies reporting on the experiences of 248 nursing and midwifery faculty experiences of online teaching during the Covid-19 Pandemic. Seven studies were undertaken in the USA with the remaining in Iran (n = 1), Korea (n = 1), Australia (n = 1), Jordan (n = 1) and one study with participants from five countries in Southeast Asia. Two studies (Choi et al., 2022; Farsi et al., 2021) carried out in person interviews, one study provided the option of online or in person interviews (Smith et al., 2021), all other data were collected online (McKay et al., 2022; Nabolsi et al., 2021; Sarkar et al., 2022; Watson et al., 2023), over the telephone (Gazza, 2022; Iheduru-Anderson & Foley, 2021), via photovoice (Kunaviktikul et al., 2022) or open-ended survey responses (Hopkins et al., 2022; Sacco & Kelly, 2021). Study characteristics are outlined in Table 5.

Analytic themes

Seven themes from our revised BFFS are now presented. These themes include 'Encouragement of Student and Faculty Exchange,' 'Development of Student Reciprocity and Quality,' 'Engagement Encouragement of Active Learning,' 'Restricted Feedback,' 'Emphasis of Time on Task,' 'Communication of High Expectations,' and 'Respect for Diverse Talents and Ways of Learning.'

Encouragement of student and faculty exchange

This theme identifies that frequent student-faculty interaction in and out of classes can be the most important element in student engagement and motivation. When faculty know students from meeting them in person, they show concern for students which helps students get through tough times and keep them motivated to learn. Faculty in our review missed the face-to-face interaction with students and each other and were concerned about communication practices as it inhibited rapport and assessment of knowledge.

Many faculty in our review believed online delivery of teaching content was less effective than face-to-face delivery (Gazza, 2022; Hopkins et al., 2022; Iheduru-Anderson & Foley, 2021; Kunaviktikul et al., 2022; McKay et al., 2022; Nabolsi et al., 2021 ; Sarkar et al., 2022).

"...students need to have the basic knowledge and skills...online teaching cannot replace the face-to-face teaching, especially in nursing practice" (Faculty, Southeast Asia, Kunaviktikul et al., 2022):

"I just really miss the live interaction with the students...you just can't have the same interactions with the students over Zoom...I enjoy seeing them. I enjoy sitting and talking with them." (Faculty, USA, Gazza, 2022).

Online teaching was criticised in our review as it inhibited 'rapport' between students and faculty (Faculty, Australia, Sarkar et al., 2022), restricted 'collegiality' (Faculty, USA, Hopkins et al., 2022) and prevented role modelling among students (Hopkins et al., 2022; McKay et al., 2022; Nabolsi et al., 2021; Sarkar et al., 2022). Faculty expressed that online teaching inhibited their effective assessment of student understanding of lecture content (Nabolsi et al., 2021; Sarkar et al., 2022):

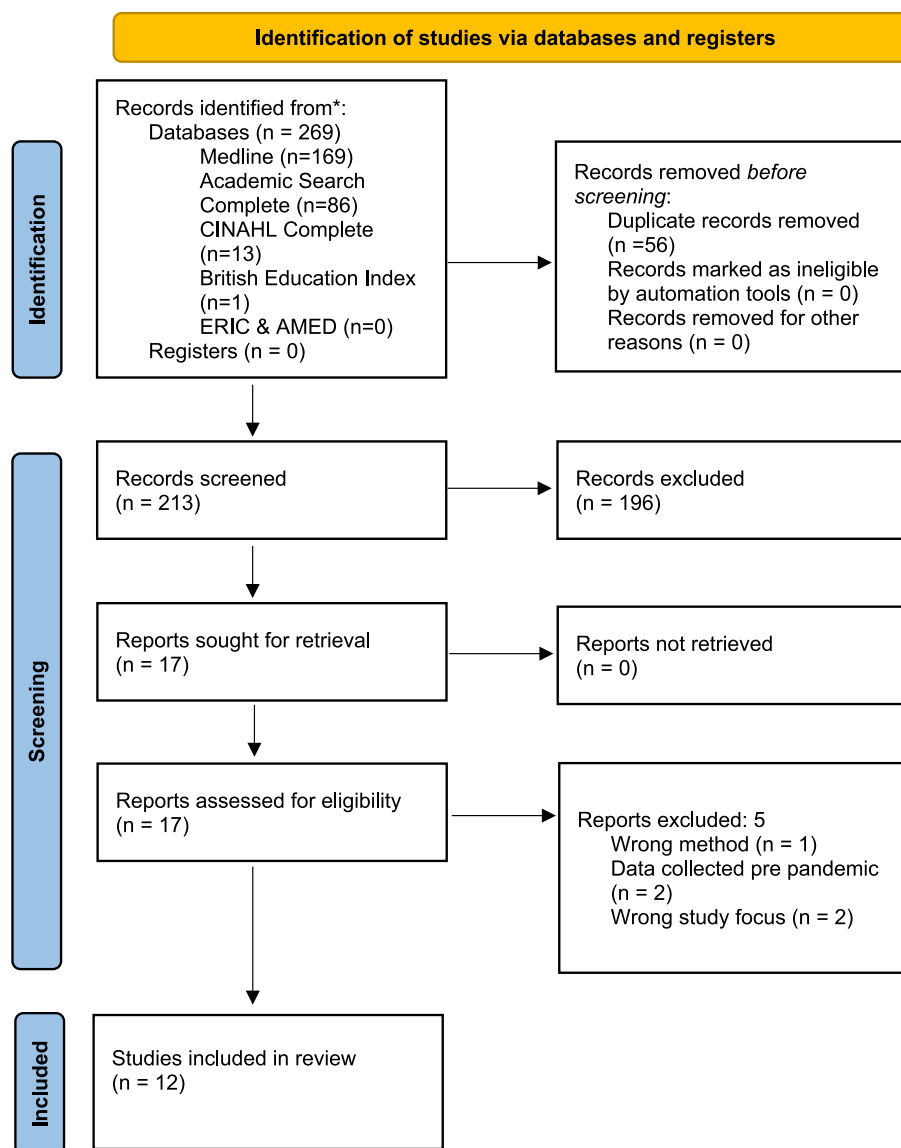


Fig. 2. PRISMA Flow Diagram

From: Page et al. (2021)

For more information, visit: <http://www.prisma-statement.org/>

"We lost the role model in online teaching...Students gain not only knowledge in the face-to-face classes but also attitudes, discipline, teamwork, and morals. Students and teachers exchange thoughts, worries and fears. The online teaching lacks the human touch and caring. We were talking to a laptop screen." (Faculty, Jordan, Nabolsi et al., 2021).

"When uploading a video recorded lecture or presentation without face-to-face discussion or eye-to-eye contact, not having the students physically present in the class makes it difficult to judge if they were able to understand the lecture." (Faculty Jordan, Nabolsi et al., 2021).

While faculty recognised the importance of student and faculty face-to-face interaction, they also identified the importance of faculty communicating with each other and supporting each other through online teaching which many had positive experiences of (Farsi et al., 2021; Gazza, 2022; Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Sarkar et al., 2022):

"Many, many hours trying to create new things, but I think that the reason why I survived with some sanity was because nursing faculty are very

generous in sharing not only just sharing wisdom but sharing tools." (Faculty, USA, McKay et al., 2022).

"I think there's been a lot of resource sharing. ... I think that's been a definite positive people being willing to say, yeah, sure, have a look at my Moodle site, take what you need." (Faculty, Australia, Sarkar et al., 2022).

Development of student reciprocity and quality engagement

This theme highlights that good learning is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning and when engaging online, motivation can be lost. Learning can be enhanced when it is in groups in classrooms as opposed to individualised online. Sharing one's own ideas and responding to others' reactions in the classroom in real time sharpens thinking and can deepen understanding.

Many faculty in our review expressed concern for the education quality while using online platforms (Choi et al., 2022; Hopkins et al.,

Table 5

Characteristics of included studies.

No	Study characteristics <i>n</i> = 12						
	Author	Year	Country	Design/method	Sample	Analysis	Study focus
1	Choi et al	2022	Korea	Qualitative study Focus group interviews (In person)	19 Nursing Professors	Thematic Analysis Braun and Clarke	Laboratory and clinical teaching experiences of nursing professors during the COVID-19 pandemic.
2	Farsi et al	2021	Iran	Qualitative Study Semi Structured Interviews (In Person)	6 Nursing Administrators and Professors 7 Nursing Students (only faculty data extracted)	Conventional Content Analysis Graneheim and Lundman method	To explain the impact of the COVID-19 pandemic on nursing education from administrators, educators, and students' perspectives.
3	Gazza	2022	USA	Hermeneutic Phenomenological Approach Individual Interviews (Telephone)	14 Academic Nurse Educators	Data, in the form of transcribed interviews, were analyzed using Barritt et al.'s (1984) five-step process	To uncover the experience of being a full-time academic nurse educator (ANE) in a baccalaureate or higher degree nursing program during the COVID-19 pandemic.
4	Hopkins et al	2022	USA	A qualitative descriptive design Open ended survey	11 nursing faculty	Content Analysis	The purpose of this study was to explore faculty teaching experiences as they transitioned to a virtual Doctor of Nursing Practice residency.
5	Iheduru-Anderson & Foley	2021	USA	Descriptive Phenomenology Telephone webex interviews	41 Nursing Faculty	Inductive Thematic Analysis	To explore the experiences of associate degree nurse faculty who transitioned to online teaching during the early months of the COVID-19 pandemic
6	Kunaviktikul et al	2022	Southeast Asia	Descriptive Qualitative Design Photovoice	52 students (only faculty data extracted) 28 Nursing faculty	Thematic Analysis	To explore the experiences of nursing students and faculty members as related to online education during the COVID-19 pandemic.
7	McKay et al	2022	USA	Qualitative Descriptive Semi Structured interviews (Online)	19 Nursing Faculty	Conventional Content Analysis	To describe the experiences of baccalaureate nursing clinical faculty transitioning from in-person clinical teaching to emergency remote clinical teaching during the COVID-19 pandemic
8	Nabolsi et al	2021	Jordan	Qualitative descriptive design guided by a phenomenological approach Focus Groups (Online)	15 Nursing Faculty	Qualitative analysis, using Colaizzi's method	The purpose of this study is to explore the first experience of nursing faculty members with online distant education (ODE) within the context of COVID-19 national curfew.
9	Sacco & Kelly	2021	USA	Mixed Method-Survey One open-ended question at the end of the survey	49 Faculty Responses to open ended question	Thematic analysis of the responses to the open-ended question was conducted using the Braun and Clarke (2006) methodology.	To describe nursing faculty experiences during the COVID-19 pandemic
10	Sarkar et al	2022	Australia	Mixed Methods Survey and Focus Groups and Individual Interviews (Online)	Data included 476 surveys and seven focus group interviews with 26 students, and 95 surveys and 17 individual interviews with educators.	Qual data: Ritchie and Spencer's (34) five-stage framework analysis.	This paper explored healthcare students' and educators' adaptability experiences to remote education
11	Smith et al	2021	USA	Qualitative Descriptive Focus Groups (In Person and Online)	15 Faculty 17 Students	Thematic content analysis guided by The Seven Principles of Effective Teaching (Chickering & Gamson, 1987)	To explore perceived characteristics of teaching effectiveness in online education among university college of nursing faculty and students.
12	Watson et al	2023	USA	Mixed Methods Survey Open Responses and Focus Groups (Online)	14 Faculty in total (7 Faculty Focus Groups) 104 students	Grounded theory content analysis for open survey responses and focus group data-Triangulation of data	The purpose of this study was to determine pre-licensure baccalaureate nursing student and nursing faculty perceptions of the effectiveness of various online teaching modalities.

2022; Iheduru-Anderson & Foley, 2021; Kunaviktikul et al., 2022; Sarkar et al., 2022; Smith et al., 2021). Faculty identified that students were less inclined to engage or take the online lessons seriously (Hopkins et al., 2022):

"...But nobody answered, all silent...This is very different from when we were physically [in class], as everyone was very active in participating...I could see their expressions..." (Faculty, Southeast Asia, Kunaviktikul et al., 2022).

"I think from a teacher's perspective, I find it very difficult because you can't, you're not getting any feedback from students. And if they're not turning their cameras on or they're not engaging, it's very hard. So you're chatting to this screen and you're not getting anything back." (Faculty, Australia, Sarkar et al., 2022).

Faculty had particular concern for the education quality of the clinical practice component of the programme (Choi et al., 2022; Iheduru-Anderson & Foley, 2021; Sarkar et al., 2022):

Table 6

Assessment of Methodological Limitations-EPOC Guidelines (Modified CASP).

Study ID	Was the context described?	Was the sampling strategy appropriate and described?	Was the data collection strategy appropriate and described?	Was the data analysis appropriate and described?	Were the findings supported by evidence?	Is there evidence of researcher reflexivity?	Have ethical issues been taken into consideration?	Overall assessment of methodological limitations
Choi, Jin, & Kim, 2022	Yes	Mostly	Yes	Yes	Yes	No	Yes	Moderate
Farsi et al., 2021	Yes	Mostly	Yes	Yes	Yes	No	Yes	Moderate
Gazza, 2022	Yes	Yes	Yes	Yes	Yes	Mostly	Yes	Minor
Hopkins, Spadaro, Hoh, Singh, & Doas, 2022	Yes	Yes	Insufficient	Yes	Yes	No	Yes	Moderate
Iheduru-Anderson & Foley, 2021	Yes	Yes	Yes	Yes	Yes	No	Yes	Minor to Moderate
Kunaviktikul et al., 2022	Yes	Yes	Yes	Yes	Yes	No	Yes	Minor to Moderate
McKay, Pariseault, Whitehouse, Smith, & Ross, 2022	Yes	Mostly	Yes	Yes	Yes	No	Yes	Moderate
Nabolsi et al., 2021	Yes	Mostly	Yes	Yes	Yes	Insufficient	Yes	Minor to Moderate
Sacco & Kelly, 2021	Yes	Insufficient	Mostly	Yes	Yes	No	Yes	Moderate
Sarkar et al., 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
Smith, Chen, & Warner-Stidham, 2021	Yes	No	Yes	Yes	Yes	Insufficient	Yes	Minor to Moderate
Watson, Templet, Leigh, Broussard, & Gillis, 2023	Yes	Insufficient	Yes	Yes	Yes	No	Insufficient	Moderate to Severe

(Glenton et al., 2022)

“Is it really okay for students to graduate? Can they go to the clinic? What is the level of students' clinical understanding? Can I ignore it and move on? These remain areas of my greatest concern” (Faculty, Korea, Choi et al., 2022).

Additional concerns faculty had were in relation to the quality of their own teaching. They felt they failed the students due to their lack of experience or preparedness for online teaching (Choi et al., 2022; Iheduru-Anderson & Foley, 2021; Sarkar et al., 2022; Smith et al., 2021). The spontaneity of teaching and *‘teachable moments where the gold is’* were lost online (Faculty, Australia, Sarkar et al., 2022):

“There was so much guilt, stress, and anxiety. I have never taught online or even taken a class online, so I felt like I was failing the students somehow.” (Faculty, USA, Iheduru-Anderson & Foley, 2021).

“I think I just carried out an absurd practice with a dummy on the screen. Unsurprisingly, I received feedback from the students that it was very disappointing” (Faculty, Korea, Choi et al., 2022).

Encouragement of active learning

This theme illuminates the dedication and efforts of faculty in adapting to online teaching practices despite their concerns about quality. It highlights how faculty incorporated active learning strategies to engage students effectively, emphasizing the importance of student involvement and interaction. The fact that faculty members worked hard to build trust and support students illuminated, creating a strong online learning community. This theme highlights that faculty were committed to student success, showing kindness and support, especially to vulnerable students. However, they were surprised to discover that

some students lacked the necessary technology for online learning and advocated for these students to ensure they were not left behind.

In our review, despite faculty being concerned about the quality of their online teaching practices, they did their best to incorporate active learning to achieve student engagement effectively (Gazza, 2022; Kunaviktikul et al., 2022; McKay et al., 2022; Sarkar et al., 2022; Smith et al., 2021). The following quotes show how faculty worked hard and challenged themselves to ensure that students were receiving the best quality education possible:

“(…) you want to see students learn, you want to challenge yourself in the way that you deliver content and get students involved and interactive. … I think the intrinsic interest is really important.” (Faculty, Australia, Sarkar et al., 2022).

Faculty went over and beyond to gain students trust and to make sure that the students were supported to improve the quality of the learning environment (Iheduru-Anderson & Foley, 2021; Sarkar et al., 2022; Smith et al., 2021). They worked hard to build an online *“community of learning with students”* (Faculty, USA, Smith et al., 2021). Faculty were vested in student success to the point that they were *“not going to allow them to fail after coming so far”* (Faculty, USA, Iheduru-Anderson & Foley, 2021):

“Being kind and supportive to the students was really my priority, I know it was stressful for everyone, but many of the students were vulnerable in many ways. Nursing education is stressful without the added stress of navigating everything online without much support.” (Faculty, USA, Iheduru-Anderson & Foley, 2021).

While faculty went over and beyond to incorporate active learning online, they were *‘shocked’* to learn that some students did not have the

technology required to learn online. They showed concern for students in these circumstances and advocated for them (Iheduru-Anderson & Foley, 2021; McKay et al., 2022).

Our findings underscores faculty's commitment to providing the best possible education and their proactive approach in overcoming challenges in the online learning environment.

Restricted feedback

This theme highlights that the online learning environment posed many challenges for providing prompt feedback and assessing students. Ensuring students are provided with prompt feedback is imperative so that they are reassured about what they know and don't yet know. Appropriate feedback is required to benefit students' performance. Students require multiple opportunities to perform and receive suggestions for improvement. This was a particular challenge in clinical practice as faculty were unable to observe students directly in clinical settings which faculty felt was a significant drawback. It illuminated that faculty relied on student logs and conversations, which they considered less effective for evaluation. Some faculty believed that students should have been allowed to gain clinical experience, even during the pandemic, to develop essential skills and competencies. However, others noted that online clinical training could benefit students who struggle with the pressures of in-person clinical environments, providing a safe space to learn and receive feedback.

Faculty in our review did not have the opportunity to 'observe' students in clinical practice and found online teaching of clinical practice a shortfall of nursing education during the Covid-19 pandemic and practice that should not have been inhibited (Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Nabolsi et al., 2021):

"Being able to observe students in clinical practice is, I mean, much of what you use to evaluate them is based on your observations, how they interact with patients. How they interact with one another, how they interact with the staff so you didn't have? I did not have that. I had to depend on what they wrote in their logs and the conversations I had with them, so I think that that is somewhat of a disadvantage when you're doing this kind of clinical experience. (...)" (Faculty, USA, McKay et al., 2022).

"I disagree with nurse leaders who did not feel that students should be at the hospitals now taking care of COVID-19 patients. If they cannot tolerate wearing PPE [Personal Protective Equipment] and taking care of patients with infectious diseases, they will never be nurses. It is better that they find another profession like waiting tables." (Faculty, USA, Iheduru-Anderson & Foley, 2021).

"(...)" It is very important for students to interact with real patients to nurture their caring attitudes and their competencies. The outcome should be safe and competent nursing graduates that cannot be achieved by complete ODE [Online Delivery of Education]." (Faculty, Jordan, Nabolsi et al., 2021).

However online clinical training has been identified by others as working well for students who could be struggling and can be used to gain experience and feedback in a safe environment (McKay et al., 2022):

"...but I actually felt like there was a space for the online clinicals in terms of those students who may struggle to process things on the floor...being there is so overstimulating, so overwhelming they're so worried about doing something wrong and hurting somebody and they... got that time that was really safe to just like walk through and you know, kind of clear up some misconceptions and walk through this step by step (...) So I think that was a help for their learning." (Faculty, USA, McKay et al., 2022).

Emphasis of time on task

This theme identifies that faculty were largely unprepared for the transition from traditional face-to-face teaching to online delivery. Time management is critical for faculty with heavy workloads to ensure high performance. However, this theme illuminates that faculty spent extensive hours accommodating students without adequate knowledge or resources, leading to significant stress and a lack of work-life balance. Experiences were described as chaotic and exhausting, with personal and work life becoming indistinguishable. The lack of managerial and technical support exacerbated these challenges, leaving faculty to figure out online teaching on their own. Despite these difficulties, faculty supported each other and emphasized the importance of management support for effective online teaching. Being realistic and allocating enough time for tasks is required to be an effective faculty member and a means of avoiding burn out and a lack of work-life balance.

Faculty in our review appeared unprepared to transition from traditional face-to-face teaching to online delivery. They spent countless hours accommodating students for effective online teaching without the appropriate knowledge or resources to support their efforts (Choi et al., 2022; Farsi et al., 2021; Gazza, 2022; Hopkins et al., 2022; Iheduru-Anderson & Foley, 2021; Kunaviktikul et al., 2022; McKay et al., 2022; Nabolsi et al., 2021; Sacco & Kelly, 2021):

"(...) I spent over 16 hours a day trying to get information into Blackboard [Virtual Learning Environment] that was daunting." (Faculty, USA, Iheduru-Anderson & Foley, 2021).

"The workload was above and beyond. We were literally on the computer with students from 9:00 am to 9:00 pm. And it was brutal." (Faculty, USA, Iheduru-Anderson & Foley, 2021).

Faculty were stressed and described a lack of work life balance (Choi et al., 2022; Farsi et al., 2021; Gazza, 2022; Hopkins et al., 2022; Iheduru-Anderson & Foley, 2021; Kunaviktikul et al., 2022; McKay et al., 2022; Nabolsi et al., 2021; Sacco & Kelly, 2021) and experiences of confusion and chaos (Farsi et al., 2021; Gazza, 2022; Hopkins et al., 2022; McKay et al., 2022; Nabolsi et al., 2021). Faculty described personal and work life as 'borderless' (Kunaviktikul et al., 2022). They were exhausted and due to workload, faculty identified a lack of love for their job (Iheduru-Anderson & Foley, 2021; Sacco & Kelly, 2021):

"I have taught for over 15 years in nursing education, but the last four months have all but burned me out. It has become an obsession because you never seem to get away from the work, and there is no balance. I am up at 6 am and still at it at 9 pm. Students are stressed and need more reassurance. I just don't have much more to give. I am retiring at the end of this." (Faculty, USA, Iheduru-Anderson & Foley, 2021).

"For two weeks it was utter chaos, and it was maddening and I couldn't get off [my computer]...I was online all day long. It was horrible. It's quietened down considerably. There's a light at the end of the tunnel. The semester is almost over." (Faculty, USA, Gazza, 2022).

Adding to the difficulty of teaching online and the amount of time spent 'figuring it out' was the lack of resources or support for faculty to teach in a different way (Choi et al., 2022; Farsi et al., 2021; Gazza, 2022; Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Nabolsi et al., 2021; Sarkar et al., 2022). Faculty were left to their own devices which added additional time pressures. While faculty supported each other in the absence of information technology or managerial support (Gazza, 2022; Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Nabolsi et al., 2021; Sacco & Kelly, 2021; Sarkar et al., 2022), support from management was identified as imperative to teaching online (Farsi et al., 2021):

"I had to learn the technical skills of e-learning by myself, it took me long hours of hard work, day, and night to prepare the lessons and search for resources like videos on YouTube and upload to Moodle [Virtual Learning Environment]. I was physically and mentally drained." (Faculty, Jordan, Nabolsi et al., 2021).

"I think management support is of utmost importance. We need to have unity of command in decision-making, and we are also in need of support. If decisions are made, they can be implemented, provided that there are upstream orders. As a whole, the support by managers and commanders always matters." (Faculty, Iran, Farsi et al., 2021).

Communication of high expectations

This theme highlights that having high expectations is important for everyone to be motivated to achieve. Expecting students to perform well stems from having high expectations of oneself as a faculty member. This theme highlights that faculty, despite being in uncharted territory, had high expectations of themselves and went above and beyond to support their students in challenging circumstances. It illuminated that faculty worked tirelessly to manage their own anxiety while providing reassurance and support to students. Faculty were determined to overcome obstacles and fulfill their roles, even at the expense of their personal and family time.

However, they also needed to manage student expectations to maintain boundaries and prevent burnout. Faculty emphasized the importance of being flexible and understanding to reduce student anxiety, but they also had to communicate their availability limits to ensure fairness and maintain their well-being. This balance was crucial in navigating the demands of online teaching during the pandemic.

The following quotations demonstrate while most faculty were in uncharted territory, they had high expectations of themselves and were going over and beyond to do their best for their students, albeit in very challenging circumstances (Choi et al., 2022; Hopkins et al., 2022; Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Nabolsi et al., 2021; Smith et al., 2021):

"It was up to me as the faculty to stem my anxiety and try to support and reassure my students," (Faculty, USA, Iheduru-Anderson & Foley, 2021).

"This experience was a response to a crisis we faced as faculty, our determination to succeed was our motivation to overcome obstacles and fulfil our expected roles as teachers, counsellors and supporters of our students even if it was on the expense of our personal and family time." (Faculty, Jordan, Nabolsi et al., 2021).

While it was evident that faculty were committed to doing their best and supporting students, they also needed to manage student expectations of them to maintain boundaries (Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Nabolsi et al., 2021; Sacco & Kelly, 2021; Smith et al., 2021; Watson et al., 2023). They also needed to be flexible and understanding to decrease student anxiety (McKay et al., 2022; Smith et al., 2021):

"I had to make sure that the students understand that I cannot be available to them at all hours of the day and week. It was not fair to me." (Faculty, USA, Iheduru-Anderson & Foley, 2021).

(...) my students needed continuous support, but I was tired of the number of calls and messages, with no time boundaries, I received calls at night that I had to deal with in such crisis, it was exhausting to me." (Faculty, Jordan, Nabolsi et al., 2021)

"I think, you know, being flexible and understanding that there are certain things...that can happen and, you know, [being] understanding about it." (Faculty, USA, McKay et al., 2022).

Respect for diverse talents and ways of learning

This theme identifies that despite the many challenges, the Covid-19 pandemic brought positive experiences and opportunities for faculty to teach online, often for the first time. Online teaching proved effective using various methods, offering flexibility and enabling students to enjoy learning in different ways. This theme highlights that faculty even found online teaching more convenient and better than traditional methods.

This theme shows how faculty demonstrated adaptability and creativity, proud of their ability to quickly transition and manage the new teaching environment. They recognised the need for change in nursing education and were optimistic about integrating online teaching skills into future practices. The pandemic also initiated professional development and showed that rapid change is possible, bringing silver linings to nursing education.

Our findings demonstrated that much of the content taught online worked well using a variety of different methods. The following quotations show how online teaching afforded flexibility for students and faculty and an opportunity for students to have 'fun' while learning in different ways (Choi et al., 2022; Hopkins et al., 2022; McKay et al., 2022; Watson et al., 2023) and was also considered 'better than the old way' (Iheduru-Anderson & Foley, 2021):

"they found that doing these things virtually were more convenient and better than the old way." (Faculty, USA, Iheduru-Anderson & Foley, 2021).

"I am really grateful that we have this technology (...) in some ways I think we had better discussions. We were able to cover more topics and concepts in content in different scenarios in the online experience, but of course then they missed the actual thing." (Faculty, USA, McKay et al., 2022).

While there were many challenges to converting traditional face-to-face teaching content to online delivery, faculty identified that they were adaptable, more so than their non nursing academic colleagues (McKay et al., 2022; Sacco & Kelly, 2021) and that 'necessity is the mother of invention' (Iheduru-Anderson & Foley, 2021). Faculty expressed that their adaptability was indicative of being good teachers and they were proud to have been able to do what they did in a short period of time (Farsi et al., 2021; Iheduru-Anderson & Foley, 2021; McKay et al., 2022; Sacco & Kelly, 2021; Sarkar et al., 2022):

"Change happens all the time and how to adapt change... is such an integral part of managing this whole situation in all aspects of our lives, not just in teaching." (Faculty, Australia, Sarkar et al., 2022).

Faculty identified that '(...) Nursing education needs to change now more than ever' (Faculty, USA, Iheduru-Anderson & Foley, 2021). Faculty were positive about using skills gained about online teaching during the pandemic in future nursing education (Choi et al., 2022; Farsi et al., 2021; Gazza, 2022; Iheduru-Anderson & Foley, 2021; Nabolsi et al., 2021; Watson et al., 2023):

"We are going to take all of these things we've learned about, used, and seen and integrate those more into what we already do because they're great." (Faculty, USA, Gazza, 2022).

Finally, it was suggested that the Covid-19 pandemic brought silver linings to nursing education. It initiated professional development for faculty and proved change can occur quickly (Gazza, 2022; Hopkins et al., 2022; Iheduru-Anderson & Foley, 2021; Kunaviktikul et al., 2022; McKay et al., 2022; Nabolsi et al., 2021; Watson et al., 2023):

“It was just heartening to know that so many changes can be made and quickly implemented without the usual faculty drama that accompanied policy and curriculum changes in the past,” (Faculty, USA, Iheduru-Anderson & Foley, 2021).

Discussion

This qualitative evidence synthesis presents what is known about the experience of nursing and midwifery faculty of online teaching during the Covid-19 pandemic. Differing views, experiences, and challenges were demonstrated, alongside the silver linings of online teaching, which is not unique to this study (Berga et al., 2021; Hall, Meyer, & Rose, 2012; Ilankoon et al., 2022; Jones et al., 2020; Leidl et al., 2020). Faculty experiences of online teaching in this QES were during an emergency remote response to a global public health emergency, with limited or no previous training or preparation.

One of the key findings in this QES was faculty concern for the lack of face-to-face teaching and interaction between students and faculty and between students themselves. Effective communication and interpersonal relationships are imperative in online nursing and midwifery education. Social interaction and the social presence of the teacher through effective communication and interpersonal relationships have been identified as essential for effective online teaching (Giltenane & Dowling, 2023; Jones et al., 2020; Mills et al., 2016). Thus, incorporating social interaction in live online learning meetings could create a sense of community and belonging for students, offset the loneliness of learning at home (Giltenane & Dowling, 2023; Kunaviktikul et al., 2022; Mills et al., 2016), and could improve student accomplishment (Barr & Tagg, 1995; Chickering & Gamson, 1987; Fiock, 2020; Giltenane & Dowling, 2023; Kunaviktikul et al., 2022; Thirsk et al., 2023).

Despite developments in online teaching within nursing programmes advancing prior to the Covid-19 pandemic (Jones et al., 2020), this QES illuminated the first experiences for most faculty of delivering education online and as such it is not surprising skills concerning effective communication and interpersonal relationship building online was identified as lacking quality by faculty. To encourage effective communication and participation online, Mills et al. (2016) suggest small group teamwork online.

This QES highlights faculty concern for appropriate student engagement using basic online platforms. Recently, Huai et al. (2024) acknowledged that online teaching methods, particularly immersive virtual reality were effective in enhancing students' learning satisfaction and improving knowledge and self-efficacy in comparison to traditional teaching methods. Evidence suggests that well-designed online teaching methods using digital tools that support interaction and teamwork are imperative for student engagement (Giltenane & Dowling, 2023; Jones et al., 2020; Mills et al., 2016; Shorey et al., 2022; Tavares et al., 2018; Thirsk et al., 2023). Online education can be transformed into effective and efficient high-quality student-centred education, provided that various supporting means for online teaching are actively implemented (Berga et al., 2021; Carolan et al., 2020; Huai et al., 2024; Jones et al., 2020; Leidl et al., 2020; Shorey et al., 2022).

Similar to others (Giltenane & Dowling, 2023; Shorey et al., 2022; Thirsk et al., 2023; Usher AM et al., 2022) and not surprisingly, this QES identified that clinical placement is essential for nursing and midwifery programmes. Additionally, practical skills training needs to be learned and experienced in the clinical environment together with in-person simulation to allow for appropriate feedback and evaluation of student learning. Shorey et al. (2022) identified through a recent review of nursing education during the Covid19 pandemic that practical skills exposure is required as healthcare professional training depends more on practical skills that require experiential learning to master. Leidl et al. (2020) and Smith et al. (2021) suggest that it is in-person clinical skills teaching that enables nursing students to simulate clinical skills in a safe non-threatening environment, with scope for improvements to be made

at the point of learning without risk to patient safety. Thus, an amalgamation of online with practical and traditional teaching methods should be considered integrating the best methods to deliver specific content (Giltenane & Dowling, 2023; Giltenane & Smith, 2023; Ilankoon et al., 2022; Shorey et al., 2022; Thirsk et al., 2023; Usher AM et al., 2022) contributing to improved student engagement than online learning alone (Giltenane & Dowling, 2023; Giltenane & Smith, 2023; Jones et al., 2020; Leidl et al., 2020; Shorey et al., 2022; Tavares et al., 2018; Thirsk et al., 2023; Usher AM et al., 2022). By incorporating online teaching methods into undergraduate nursing and midwifery programmes can improve and complement traditional teaching, stimulate autonomy which ultimately improves the production and exchange of knowledge (Giltenane & Smith, 2023; Tavares et al., 2018).

This QES and like others findings, suggests that it is time to examine nursing curricula and enhance teaching styles to incorporate online methods (Jones et al., 2020; Tavares et al., 2018). Shorey et al. (2022) further suggests that to improve nursing faculty members' experience of online teaching, more institutions need to transition to blended education as the new 'normal'. This will need managerial support and professional development for faculty to effectively transform nursing and midwifery curricula (Gazza, 2022; Giltenane & Dowling, 2023; Giltenane & Smith, 2023; Hopkins et al., 2022; Iheduru-Anderson & Foley, 2021; Kunaviktikul et al., 2022; McKay et al., 2022; Nabolsi et al., 2021; Tavares et al., 2018; Watson et al., 2023). Carolan et al. (2020) agree that we now have the chance to transform undergraduate nursing curricula, which requires collaboration among Higher Educational Institutions, Clinical Practice Partners and Regulatory Bodies. This can be achieved using the lessons learned from emergency remote teaching to plan and organise teaching effectively (Fawns, Aitken, & Jones, 2019; Giltenane & Dowling, 2023; Giltenane & Smith, 2023; Laurillard, Kennedy, & Charlton, 2018; Moore, Trust, Lockee, Bond, & Hodges, 2021).

Transforming nursing curricula is not without caution as many point out that limiting face-to-face contact with professionals and users of healthcare services, in both interaction and development of techniques and procedures, could diminish the quality of qualified professionals to identify patient's needs (de Oliveira et al., 2017; Honkavuo, 2020; Huai et al., 2024). Implementing Giltenane and Dowling's (2023) model 'Blending with purpose: The multimodal model for undergraduate nursing programmes with considerations' (Fig. 1) could support curricula development, where the pedagogy informs the approach that will work best to support student learning and professional development for faculty and organisations. Additional supports, training and resources will enable effective blended teaching approaches within nursing programmes (Fig. 1). Thus, with managerial support and professional development aimed at teaching online, teaching experiences may be much better in the future allowing flexibility for faculty and students (Giltenane & Dowling, 2023; Giltenane & Smith, 2023; Jones et al., 2020; Tavares et al., 2016). Furthermore, Wu (2024) suggests interdisciplinary collaboration between nursing educators and information technologists will be necessary to promote the use of Artificial Intelligence in future nursing education.

Study limitations and future research

The studies in this review represent nursing and midwifery faculty experience of online teaching in an emergency-situation, where traditional delivery of content was rapidly transferred to an online platform without prior planning, organisation or professional development for educators. Faculty experience of purposefully designed online programmes may elicit different results. The search strategy was limited to the English language. The experience of the students was not considered.

Future research should look at the professional development needs of educators to deliver blended nursing and midwifery programmes and 'post pandemic' experiences of online teaching and learning. The views and experience of nurse and midwifery educators concerning the use of Artificial Intelligence in their teaching also need to be explored to identify professional development requirements.

Conclusions

This QES using a BFFS highlights that within nursing and midwifery education, clinical placement and practical skills training are essential to be delivered in an in-person environment. However, traditional face-to-face programmes could be enhanced using online components. The social presence of the teacher through effective communication and interpersonal relationships is imperative in online education. The limited in-person clinical placement exposure restricted faculty ability to observe students and provide meaningful timely feedback. Constrained active learning techniques due to faculty inexperience of online teaching also limited student engagement and motivation. For effective and efficient high quality blended nursing and midwifery education, professional development and managerial support for faculty are required together with collaboration among Higher Educational Institutions, Clinical Practice Partners and Regulatory Bodies. This could be achieved through the implementation of the ‘Blending with Purpose: The Multimodal Model with considerations’ (Giltenane & Dowling, 2023) where the pedagogical objectives drive the activities and approaches with the associated organisation, supports and training for faculty and students.

CRedit authorship contribution statement

Martina Giltenane: Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization, Writing – review & editing, Writing – original draft. **Maura Dowling:** Validation, Methodology, Formal analysis, Data curation, Writing – review & editing.

Funding source

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.profnurs.2025.04.013>.

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