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Te Pūkenga

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Clinical competency paused: The new graduate nurse experience of transition post COVID-19. What was the effectiveness of nurse education programmes in developing clinical competency among newly qualified nurses in New Zealand during the COVID-19 pandemic?

Karla Breen Rickerby*

Abstract

Background: The changing demands of nurse education during the COVID pandemic lead to swift modifications in nurse education delivery. The aim of this integrative review was to identify and synthesize the current position and identify the longer-term impact of COVID-19 on the nurse education system in New Zealand.

Method: An integrative literature review methodology was utilised. Specific inclusion/exclusion criteria were applied to three databases. The Critical Appraisal Skills Programme (CASP) framework (CASP, 2022) for qualitative and quantitative research was used. Four articles that met the inclusion criteria focused on New Zealand and one article had a focus on Australian practice.

Results: Meta-synthesis was conducted and identified three main themes: education andragogy, resource implications and clinical competency.

Discussion: The findings indicate that there exists considerable variation in nurse education delivery because of the COVID-19 response. The main themes, with sub-themes, are critical in the nurse education development of nurse education programmes. The emphasis is on the need to enhance the quality and consistency of nurse education in New Zealand to prepare for future-proofing nurse education across emergency situations. How transferable were the lessons learned from the COVID-19 pandemic?

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I. BACKGROUND

In late 2019, a respiratory outbreak of unknown aetiology was reported in Wuhan, China. The World Health Organisation (WHO) named the novel coronavirus disease COVID-19 and declared the COVID-19 outbreak as a pandemic on March 11, 2020 (WHO, 2020a). COVID-19 has had an immense impact internationally; from 12 April, 2023 the virus was responsible for 6,897,025 deaths worldwide (WHO, 2020b). As of 12 April, 2023, the WHO (2020b) reported that New Zealand had 2,217,047 confirmed cases of COVID-19 and 2687 deaths. A State of National Emergency was declared in New Zealand on March 25, 2020, followed by a national lockdown on March 26, 2020, which brought the country to a standstill (Te Whatu Ora - Health New Zealand, 2022).

The COVID-19 pandemic impacted on the everyday life and work of healthcare professionals (Chen et al., 2023; González-Rodríguez & Labad, 2020; Halcomb et al., 2020; Russell et al., 2022). Ministry of Health guidelines on alert level 4 instructed all educational facilities to close, with access to tertiary sites prohibited (Tertiary Education Commission (TEC), nd). The advice further stipulated for the provision of distance learning, with all face-to-face contact suspended (TEC, n.d). Additionally, for nursing students, the reprioritisation of healthcare services led to the suspension of workplace learning. The challenge for nursing students was the need to adapt and embrace new ways of learning to aid completion of clinical competencies. The closing of New Zealand borders and the level 4 lockdown occurred after the commencement of the academic year, resulting in student commitment to the enrolled programme and tertiary provider (Smart, 2021).

The COVID-19 pandemic represented one of the biggest disruptions to tertiary level educational study, this being particularly prevalent in the Bachelor of Nursing training. According to the *Health Practitioners Competence Assurance Act 2003*, the Nursing Council New Zealand (NCNZ) is responsible with accrediting nursing education providers and programmes. The NCNZ establishes educational standards to ensure the effective design and delivery of these programmes and monitors providers to uphold these standards over time (NCNZ, 2022). NCNZ have recently consulted on changes to the minimum number of clinical hours required in registered nurse education programmes (NCNZ, 2023) in response to international research (Hayden et al., 2014; Williams et al., 2022). This research emphasised the quality and outcomes of learning experiences as opposed to a focus on purely the number of hours. The current position, and the position of NCNZ throughout the COVID-19 pandemic, was the maintaining of the requirement for the completion of a minimum of 1,100 clinical hours across the three years of a Bachelor of Nursing programme (NCNZ, 2023). The NCNZ (2023) stated that all hours must be completed in 'real' clinical settings. In other words, simulated environments did not count towards clinical hours, despite a depth of research indicating that simulation in nursing education provides training that meets clinical competency (Bogossian et al., 2018; Kable, et al., 2018; Reid, 2019; World Health Organisation, 2018). In January 2022, the NCNZ approved the inclusion of Standard Seven, an emergency standard in the existing 2021 education standards (NCNZ, 2022). The standard recognised that during a national emergency, and in the event that the accredited schedule of clinical placements is significantly disrupted by restrictions, a specific number of hours in paid employment related to the emergency is allowed within a student's required clinical learning hours. In certain circumstances, a reduction in overall clinical hours may be permitted. A total of up to 200 hours of paid clinical placement can be counted towards student nurse clinical hours in a national emergency.

Student nurses were not included on the essential health service and workers list (Ministry of Health, 2020). This was supported by the NCNZ, who advised that student nurses should not be within clinical settings and environments during alert level 4 (Ministry of Health, 2020). The rationale behind this decision was that effective preceptorship, registered nurse oversight, alignment with learning objectives, and competency assessment could not be guaranteed under a state of emergency, this was reflective of international practice (AHPRA, 2020; Leigh et al., 2020). The national nursing student survey highlights 40% of students reported a major impact

on clinical placements because of COVID-19 restrictions (Willis, 2021). Delays to student learning and progression were acknowledged by the NCNZ, with a noted impact on traditional clinical experience opportunities becoming less available (Ministry of Health, 2020). As a result, nurse education had to pivot to support new clinical learning models, changes in practice, and more flexible approaches to ensure the outcome of a safe and competent new graduate nurse.

New Zealand nursing students reported repercussions in placements including restricted clinical environments, extension to the academic year to catch-up, and limited opportunities to learn or practice clinical skills (Willis, 2021). The prioritisation for nursing education was on third year students, to ensure progression within the Bachelor of Nursing programme and registration into the nursing workforce (Thomson et al., 2021). The changes implemented by the NCNZ to support student nurses during the pandemic included offering State Final examinations every two months, which allowed flexibility and time to ensure required clinical hours and comprehensive assessment of competence was achieved.

Internationally, a growing body of literature highlights that COVID-19 posed significant challenges for nursing programmes, which traditionally rely on face-to-face and hands-on instruction to meet competency requirements. Limitations in clinical experience and in-person attendance have raised concerns over delayed program progression and completion (Dewart et al., 2020; Toylat et al., 2022). Aligned to this was fewer learning opportunities that impacted on achieving clinical competency (Ulenaers et al., 2021). Research has demonstrated that due to the pandemic, students missed out on opportunities to solidify basic skills and synthesize key concepts and, a students' perception of a lack of competence for nursing practice upon graduation (Agu et al., 2021; Aslan & Pekince, 2021; Dewart et al., 2020; Gaffney et al., 2021; Michel et al., 2021; Toylat et al., 2022). This decrease in confidence in ability was particularly apparent in early-years nursing students and Indigenous learners (Gaffney et al., 2021).

A. Aim

Despite the growing body of international research about the experiences of nursing students during the pandemic, research on the impact in the New Zealand context is lacking. This integrative review aims to generate a clearer understanding of the consequences of disrupted undergraduate nurse education during the COVID-19 pandemic in relation to clinical competency and potential impact in the transition to registered nurse.

This type of research can provide valuable insights into the challenges faced by nursing students during emergency situations and how these challenges may impact on student nurses ability to develop clinical competencies. The question becomes: is learning from the COVID-19 pandemic transferable?

B. Method

This review followed an integrative approach, utilizing the methodology of Whittemore & Knafl (2005) that specifies the phases of question identification, literature search, data evaluation, data analysis and presentation of results. This approach has been effective in synthesizing findings collected from studies with a diverse range of methodologies (Wright-St Clair et al., 2017). Equally, integrated reviews have been effective in coalescing broad perspectives of phenomena of interest to nursing (Whittemore & Knafl, 2005).

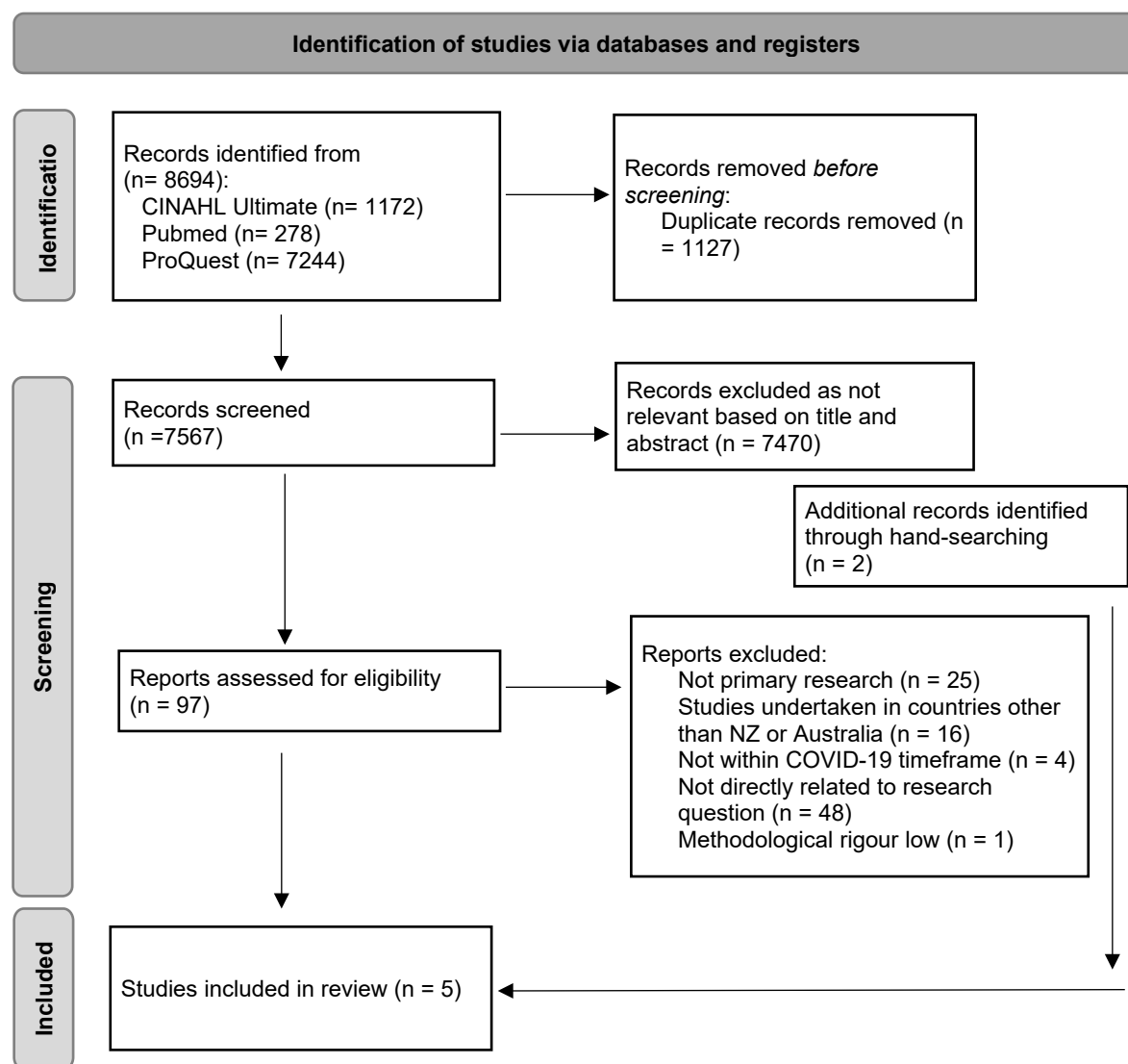
An initial scoping search of databases was undertaken to establish a broad view of the research topic. This led to the formulation and refinement of the search strategy. A search of three electronic databases – CINAHL, Pubmed, and ProQuest – was undertaken. The Boolean operators “and” and “or” were used. The search string used the following key words and Medical Subject Heading terms (MESH): (covid* OR covid-19 OR coronavirus OR 2019-cov OR sars-cov-2 OR cov-19) AND (teach* OR learn* OR educat* OR “online learn*” OR “remote learn*” OR “distance learn*” OR simulation OR instru*) AND (nurs*) AND (zealand OR Aotearoa OR Australasia). Additional records were identified through hand-searching to identify eligible

research in New Zealand specific journals. This was important as New Zealand journals are not indexed in several databases.

The inclusion criteria used was based on the criteria proposed by Jokelainen et al. (2011), and included language, terms/keywords, content, and availability. The language of the included studies was English. Only original full-text peer reviewed studies published in the last three years were included. The focus was undergraduate nurse education during COVID-19, with this narrowly defining the search period. As the review is targeted on a New Zealand and Australian nursing student population group, the exclusion criteria included countries outside of Australasia. This reflecting the differential of clinical hour requirements internationally in nurse education. Reviews, reflections, and editorials were excluded. Secondary analyses were excluded.

The search was conducted on April 4, 2023. A total of 8694 references were retrieved in the initial search. The articles were uploaded to Endnote eliminating duplicates initially. The Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram (Page et al., 2021) was utilised for the search process and is shown in Figure 1. Following screening of the title and abstracts, 97 were reviewed against the inclusion-exclusion criteria (Figure 1).

Figure 1
Amended PRISMA 2020 Flow Diagram of Database Searches (Page et al., 2021).



A. Quality Appraisal

The strength of a review's findings is reliant on the quality of studies included (Coughlan & Cronin, 2017). All full-text articles were assessed for eligibility by the author. The studies were appraised using the Critical Appraisal Skills Programme (CASP) framework (CASP, 2022). Four articles were considered as having a high level of robustness of 70% or over and were included in this integrative review. However, due to the scarcity of research with a focus on New Zealand and Australia, one article that was considered as having a moderate level of robustness (60%) was also included in this integrative review.

B. Data Extraction and Analysis/Synthesis

Thematic analysis for the qualitative research followed Braun & Clarke (2006). The iterative process of reflexivity was undertaken prior to phase one (Jamieson et al., 2023). It was important that, as a part of the research process it is necessary to acknowledge that personal bias may influence the research process (Creswell, 2014; Lazard & McAvoy, 2020). A bias exists from the outset. The question being: how am I influencing the research process as an academic lecturer

who also works across clinical spaces alongside undergraduate nurses? By clearly stating this position from the start, there has been room to acknowledge how my role has provided a context to the decisions in this review. My personal insight, guided by the process of reflexivity, was characterised by a questioning of assumptions through a dialogue with colleagues and the different perspectives of educators and nursing students, which framed the research. These discussions formed a reflective journal and provided a space for reflection, thus enabling critical inquiry and self-knowledge. This process enabled ongoing critical engagement with the voices that were heard within the clinical and education environment and set the tone for the literature review framework.

The first phase of data extraction required an immersion in the data such that the “depth and breadth of the content” was fully understood (Braun & Clarke, 2006). This aided the conceptualisation and searching for patterns and meaning within the data. Data from the five selected full-text articles was extracted and compiled into a table (Table 1). The data was compared, and categories were identified across the data. Concurrently, phase two generated initial codes to organize the data (Braun & Clarke, 2006). Synthesis of the included studies involved reviewing each study to identify themes. In phase four, reviewing and, thence, defining the key themes ensured the identification of findings that shared common meaning (Braun & Clarke, 2006) (Table 1).

Table 1
Data Extraction: Qualitative and Quantitative Methodologies

Author, Year, Country setting	Aim of study	Research design and methodology	Sample size	Innovation	Key findings
Walker, C. et al. 2022 Australia	To explore the benefits, challenges and perceived quality of a telehealth service delivery model from the perspectives of clients and students.	Qualitative Semi-structured student interviews Client open-response survey	Final year nursing and allied health students n=14 Adult clients with chronic disease n=14 Total of 220 occasions of services conducted via telehealth	Telehealth placement	1. New/adapted skills 2. Resources to support training 3. Interprofessional education 4. Client role
Ion, R. et al. 2021 New Zealand Australia Canada Singapore United Kingdom	To explore the experiences of nurse educators in their response to COVID-19	Qualitative Interpretative approach: Purposive sampling Interviews Reflection and Experiences	19 leaders with strategic responsibility for nurse education • Australia n=6 • Canada n=2 • NZ n=1 • Singapore n=1 • UK n=9 Primary role university based Govt/Professional regulation around education X2 authors participants in research	Education innovation	1. Crisis driven adaptability & flexibility 2. Responsive, complex & changing communication 3. Making decisions for student & staff safety 4. Stronger partnerships

Author, Year, Country setting	Aim of study	Research design and methodology	Sample size	Innovation	Key findings
Brownie, S.M. et al. 2021 New Zealand	To evaluate rapid response student telehealth clinical frailty placement, students undertaking risk assessment.	Qualitative Case study: Mixed method questionnaire Staff pre-placement survey (n=5) Staff post-placement interview (n=4) Student pre-placement survey (n=17) Student post-placement survey Student post-placement interviews /focus groups (n=2) Student reflective diaries (n=18)	3 rd year B.Nursing students: 19 students 6 nursing staff members	Telehealth placement for frailty utilising interRai assessment	Student – Staff themes 1. Context of practice in COVID 2. Implementation of innovation 3. Nursing competencies 4. Provider relationships 5. Community insights
Ramis, M-A. et al. 2023 Australia	What was the impact on students and staff, of changes, to the Medication unit of competency in response to COVID-19 restrictions?	Mixed methods Convenience sample N= Student satisfaction survey: 13-item -Likert scale	Students n= 28 completed survey n= 46 focus group male and female	Reformulation of education in medication competency including: -Re-sequencing -SIM -Online -theory	1. Variety of learning options positive 2. Sequence of delivery impact 3. Online access satisfaction: easy integration into lifestyle, build confidence.

Author, Year, Country setting	Aim of study	Research design and methodology	Sample size	Innovation	Key findings
		Quantitative -descriptive statistics -assessment comparison Qualitative -separate semi-structured focus groups for students and staff	ethnic background included Aboriginal and Torres Strait Islander Staff n= 5 with written feedback by n= 1	Clinical placement cancelled	4. Learning support 5. Staff: Agility/flexibility=stress ful but focus on student experience 6. Staff: range of strategies enhanced learning opportunities 7. Staff: ongoing future positive impact
Kalanlar, B. 2021 Top 60 QS University Rankings in 2020, with score of 79.9 – 95.3: -Australia n= 10 -New Zealand n=1	1. What are the characteristics of distance nursing education during the pandemic? 2. What are the nursing students' views on online education during the pandemic? 3. What difficulties have been experienced by nursing educators during the pandemic? 4. What are the views and suggestions of nursing educators in regard to nursing education during the pandemic?	Quantitative Descriptive Cross-sectional Web-based survey questionnaire, taking 10- 15 minutes to complete: -42 closed ended questions • 15 questions on characteristics of distance education • 27 nurse educators' views -3 open ended • 2 about student experience • 1 nurse educators' views	Pilot tested: Nurse educators n=6 Participants: 30 nurse educators from 30 Universities	Distance Learning -81% online classes from home Platforms -Zoom (50%) -Microsoft Teams (17%) -BlueJeans (5%) -Skype (5%) -Webex (2%) -Other (21%) Simulation (61%) HF Manikins (12%) Telehealth (10%) Other: case studies, hybrid (17%)	Educators 1. Impact on role of nurse educator 2. Development of curricula = online: technical competence 3. Characteristics -Policy/procedures -Distance learning -Communication -Roles/responsibilities 4. Theory – practice gap: Impact on domains of learning needs in nursing students -Cognitive -Psychomotor -Affective Students 1. Difficulties with online learning

Two studies combined telehealth as a means for placement learning (Brownie et al., 2021; Walker et al., 2022). One of these studies was New Zealand-based, exploring third year nursing student assessment skills of frailty patients (Brownie et al., 2021). Whilst the Australian study was a rural based student-led interprofessional clinical placement that promoted a wellness model of client-centred, goal-orientated services to clients with low to rising risk of developing a chronic disease (Walker et al., 2022).

One study focused on a combination of learning experiences with a focus on teacher designed hybrid learning environments. In Ramis et al. (2023) study, a particular emphasis was the andragogical principles of content delivery in the use of technology, simulation, and face-to-face teaching in a flipped classroom approach. The lecturers reimagined the traditional learning approaches and presented students with a range of options that aligned with their preferred learning style (Ramis et al., 2023).

To generate a clearer understanding of the consequences of disrupted nurse education during the COVID-19 pandemic in relation to clinical competency, an important consideration was nurse education leaders' decision making and innovation. All studies explored nurse educator experiences that enabled continuation and completion of nurse programmes, exploring a range of andragogical learning approaches (Brownie et al., 2021; Ion et al., 2021; Kalanlar, 2022; Ramis et al., 2023; Walker et al., 2022).

II. FINDINGS

Three key themes, and several subthemes, were developed from the data (Table 2).

Table 2
Key Themes from the Data

Major Themes		
Education andragogy	Resource implications	Clinical competency
Subthemes		
Quickly adapt to, and incorporate, technology into student learning opportunities	Underlying knowledge in use of technology	Relationships: Interprofessional Stakeholder Client/patient
Innovation of learning design: Simulation Telehealth Blended learning	Communication between ākonga/learner and teaching staff regarding student support	Realism and authenticity of clinical placement
Indicators for learning		

A. Theme 1: Education Andragogy

The first theme outlines the actualization of the impact of the COVID-19 pandemic on the delivery of nurse education in meeting competency. The rapid transition into lockdown and a cessation of in-person education and clinical placement opportunities required innovation in education delivery. Several of the researchers indicated the innovation of curriculum design through the utilization of technology to incorporate wider educational experience (Brownie et al.,

2021; Kalanlar, 2022; Ramis et al., 2023; Walker et al., 2022). Learning was discussed in a variety of ways including telehealth (Brownie et al., 2021), simulation scenarios (Ramis et al., 2023) and blended and hybrid learning (Kalanlar, 2022; Ramis et al., 2023; Walker et al., 2022). Advocacy for andragogical learning through self-directed and authentic contexts (Brownie et al., 2021; Ion, 2022; Ramis et al., 2023) become the foundation for nursing student learning during the COVID-19 pandemic.

The challenges of active learning andragogy for developing student understanding, particularly in relation to indicators for learning in clinical competency, during the COVID-19 pandemic, was highlighted. Kalanlar (2022) established that 28% of nurse educators experienced difficulties in diversifying a curriculum designed for face-to-face learning to distance learning. Impacting on these challenges was authentic learning environments (Brownie et al., 2021; Ion et al., 2022; Ramis et al., 2023; Walker et al., 2022). Equally, the importance of teacher and supervisor presence within the context of learning was emphasized across the literature (Brownie et al., 2021; Ion et al., 2022; Ramis et al., 2023; Walker et al., 2022). Academic staff agreed that the impact of the curriculum changes focused on the provision of a variety of resources and learning needs (Ramis et al., 2023). Within nurse education, the development of clinical competence is recognised as integral to teaching design in nurse curriculum.

Students' in Ramis et al. (2023) qualitative study were exposed to learning content that incorporated different modes of content delivery; face-to-face, online platform, simulation. The sequence of the delivery of the module differed to accommodate a reconfiguration to smaller class size, with one group having simulation prior to the theory component. The authors identify that the online learning module received 96.4% confidence from students (Ramis et al., 2023). Nevertheless, within the study, students' expressed difficulties around individual learning styles and reported concerns around 'cementing learning' (Ramis et al., 2023). This reflected the importance of the sequence of content and activity and ensuring a well-marked learning pathway for students.

It was highlighted by Ion et al. (2021) that pre-COVID, initiatives were in place to transition components of courses into blended or online formats. However, an outcome of the pandemic was, rapid, fast track "crisis driven" innovation for the courses transitioning to fully online modes (Ion et al., 2021). The change to a technologically driven delivery was perceived as being permanent (Brownie et al., 2021; Ion et al., 2021; Ramis et al., 2023). Though, Brownie et al. (2021) and Kalanlar (2022) note that the initiation and the implementation of a programme needed to consider multiple priorities, including IT literacy and security requirements, remote working and supervision, and curriculum competencies.

B. Theme 2: Resource Implications

It is evident that the requirements to enable continuing nursing education programmes required significant planning, and stakeholder engagement as well as student nurse resilience and adaptability (Brownie et al., 2021; Ion et al., 2022; Kalanlar, 2022; Ramis et al., 2023). Two articles identified the need for additional training for the student nurse prior to their entering new clinical placement opportunities (Walker et al., 2022; Brownie et al., 2021). Walker et al. (2022) revealed that the majority of students had no prior clinical experience of telehealth service delivery, underscoring the development of different placement modalities in response to enabling learning within an emergency situation. The quantitative findings of Kalanlar (2022) indicated that a common student complaint was being overwhelmed by the virtual environment with technology being identified as a major challenge or barrier. Interestingly, one of the articles highlighted the need for IT training for patients to access virtual appointments to enable the clinical placement to proceed (Walker et al., 2022). This was coupled with the need for nurse educators and supervisors to undertake specific clinical training (Brownie et al., 2021; Walker et al., 2022). Whilst Kalanlar (2022) reports that only half of the nurse educator respondents had received training in distance learning teaching. All the articles discussed increased curricula content in digital literacy and requirements around set-up and security implications (Brownie et al., 2021; Ion et al., 2022; Kalanlar, 2022; Ramis et al., 2023; Walker et al., 2022). Several key barriers and challenges were

highlighted, educators required knowledge on navigating safe virtual educational environments and to adjust to new methods of conducting learning (Ion et al., 2022). This included overcoming challenges in building rapport and fostering interactions.

Reflections from staff reported an increase in learning and pastoral support for students. The impact on staff workload was compounded by the complexity of timetabling (Ramis et al., 2023), education design restructuring (Ramis et al., 2023; Kalanlar, 2022; Walker et al., 2022) and flexibility to be able to work across different learning environments (Ramis et al., 2023). Educational resources should encompass principles and best practices in technology-driven education. The Nursing Council of New Zealand competencies remain unchanged, underscoring the need to maintain consistent quality in nurse education regardless of the delivery mode. In the context of educational resources, it is crucial to address the findings of Ion et al. (2022), which highlighted the significant impact on students working within a pandemic situation. This included navigating different levels of supervision, different realities, and rapidly evolving protocols. These insights emphasise the need for robust educational resources that can effectively support students in dynamic and challenging environments.

C. Theme 3: Realism and Authenticity of Clinical Placement

Analysis identified that realism and authenticity of clinical practice was a central theme in the design of nurse education and the completion of competency requirements (Brownie et al., 2021; Ion et al., 2022; Kalanlar, 2022; Walker et al., 2022). For many of the students, online and simulated learning was perceived as lacking in authenticity and was deemed a barrier to developing clinical skills (Kalanlar, 2022) with the lack of in-person interaction being cited as a concern (Kalanlar, 2022). Conversely, Ramis et al. (2023) reports that student responses to online learning was authentic and real world. Simulation experience was considered a safe place for learning by educators, providing opportunities for repeated practice, working through the whole cycle of learning for students (Ramis et al., 2023). Telehealth clinical placement experience was regarded as authentic, playing a “strong role” in student learning (Walker et al., 2022, 86). Students reflected on the importance of communication in interactions, inter-professionally and with clients that was aided by telehealth placement (Brownie et al., 2021; Walker et al., 2022). Supervisors reported that students developed opportunities to exercise clinical judgement and developed therapeutic competencies with greater autonomy (Brownie et al., 2021).

Significantly, the importance of partnerships and collaboration with stakeholders and the flexibility for innovation in clinical placement was highlighted (Brownie et al., 2021; Ion et al., 2022). The rapid response of stakeholders created different types of authentic clinical placement, particularly within telehealth (Brownie et al., 2021; Walker et al., 2022). Nevertheless, while the authors described their preparations for the students, they did not emphasise the engagement of stakeholders in facilitating authentic learning. This omission made it challenging to determine the extent to which stakeholder innovation contributed to supporting clinical placement. Subsequently it was difficult to ascertain the connection between the preparation for the learning opportunities within the educational institute and the experience and students’ learning during the clinical placement. What is evident is that a coordinated approach to learning with a variety of learning modalities within the education package was important in ensuring authenticity in clinical placement. The position was completion of clinical placement and attainment of competency versus disruption of education (Ion et al., 2022).

III. DISCUSSION

The static state of nurse education in New Zealand was revealed during the COVID-19 pandemic (Rook et al., 2022). This review found that there has been a rapid shift in the format in the delivery of nurse education, particularly in relation of the attainment of clinical competency. Equally, how learners engage with nurse education has significantly evolved, having seen the incorporation of online learning (Ali et al., 2016; Li & Lilani, 2020; Oducado & Soriano, 2021), simulation (Reid-Searl et al., 2022), hybrid and blended learning (Anderson et al., 2022; Green,

2022), and diversification in clinical placement opportunities (Salter et al., 2020; Walker et al., 2022).

Attainment of clinical competency during COVID-19 was a challenging element of nurse training for students (Ulenaers et al., 2021). Educational institutions scrambled to transfer clinical competency learning experiences that were normally face-to-face into different learning platforms to ensure continuity of education and graduation. In New Zealand and Australia clinical placement hours are specified by the governing accreditation body in order to graduate, with a requirement for increasing levels of responsibility and autonomy over the degree programme. The most concerning aspect of the COVID-19 restrictions was the reconfiguration of placements to ensure that the student nurse attained competency. To return to the question initially posed, what is the impact on the new graduate nurse?

Mitigating the clinical hours requirement through the inclusion of a diversity of andragogical teaching methods is highlighted in international research, from the integrating of digital technology in, collaborative blended learning and flipped classroom methodologies (Hill et al., 2020; Jowsey et al., 2020; Natarajan & Joseph, 2021; Thomson et al., 2021), experimental learning supported by authentic assessment (Anderson et al., 2022; Barton & Collins, 2018; Bosnia & Suljic-Mehmedika, 2021), and asynchronous and synchronous simulation (Bradford et al., 2021; Natarajan & Joseph, 2021; Phang et al., 2021). In England, Bradford et al. (2021) describes web-based virtual asynchronous clinical learning, where a patient encounter is simulated with animated avatars. Students collected the patient history, performed a virtual examination, created a differential diagnosis list, and devised a plan of care. It was noted that the online learning format did not lend itself to shared decision making with the patient (Bradford et al., 2021). Whilst Natarajan & Joseph (2021) highlight that 71.8% of students in their study in Oman were not satisfied with asynchronous simulation using YouTube videos in flipped classroom learning formats. This is supported by research in Sweden, where Langegård et al. (2021) found that many students showed a preference for traditional in-person learning, with some reporting reduced motivation with the online format. Hamadi et al. (2021) interestingly highlights that, students felt increased stress in the category of “lack of professional knowledge and skills” (p. 631). Limiting in-person experiences for students was perceived to have the potential to slow the growth of clinical reasoning, reduce or delay skill development and decrease confidence in nursing students (Noh, 2021). Conversely, the blended learning approach of online learning supported by simulation was reported by students to foster a belief in their ability to acquire specific skill-based tasks (Bradford et al., 2021) helping to ease students into clinical practice (Reid-Searl et al., 2022). Anderson et al. (2022) describes an innovative learning health promotion programme centred around authentic assessment tasks. Their study emphasised practical application, allowing students to grasp the sequential nature of health promotion and its relevance to their future careers. Qualitative feedback gathered from student nurses highlighted how this approach facilitated an understanding of the practicalities involved in health promotion and its direct applicability to professional practice. The integration of authentic assessment tasks not only enhanced learning outcomes but also provided valuable insights into the effectiveness of experiential learning in nurse education (Anderson et al., 2022). Although the COVID-19 transition was inevitable and abrupt, factors that are important to consider when transitioning from face-to-face to an online interface is the development of competency in clinical skills and the notion of being connected to, and socialised within, the nursing profession.

A plethora of international studies have highlighted the complexities of navigating hands-on clinical practice to gain competency during the COVID-19 pandemic (Godbold et al., 2021; Hill et al., 2020; Oducado & Soriano, 2021). Thomas (2021) acknowledges that the hands-on component of nursing and competency acquirement is lacking in any educational approach without the immersion into the nursing professional culture in practice. Ulenaers' et al. (2021) study in Belgium highlights that students regretted that there were fewer learning opportunities as a result of COVID-19, making some competencies impossible to attain and placing a limitation on opportunities to practice technical nursing skills. In New Zealand, NCNZ (2022) introduced the Registered Nurse Programme Education Standard, recognising paid employment as clinical

hours in the case of an emergency of national significance. An Ara Institute and Canterbury District Health Board collaboration brought student nurses into the hospital setting to work as health care assistants (HCA). The student nurses' HCA hours of employment counted towards clinical competency in their nursing degree (Ara/Te Pūkenga, 2022). A significant concern arises from the discrepancy between the scope of practice of the health care assistant role and that of a practicing student nurse. In a United Kingdom based study a central issue highlighted was the inherent tension between functioning as an employee and fulfilling the role of a pre-registration nurse student: some students reported being required to perform tasks that exceeded their designated responsibilities (Godbold et al., 2021). While andragogical learning in authentic contexts empowers learner agency (Green, 2022), it is essential to establish clear guidelines that will support student nurses to attain competency through actively participating in learning opportunities whilst effectively managing the conflicting roles inherent in being both a student and an employee.

What resonates in international research is the need to be innovative in providing clinical placements for nursing students that transcends the initial pandemic response (Brownie et al., 2021; Salter et al., 2020; Walker et al., 2022). Despite the limited availability of clinical placement opportunities and thus, opportunities to practice clinical skills, innovative placements reported improvements in student self-efficacy, with implications for student confidence and associated feelings of mastery (Brownie et al., 2021; King Goode et al., 2022; Ulenaers et al., 2021; Walker et al., 2022). Clinical placements equally developed and fostered inter-professional role modelling (Fernández-Basanta et al., 2022; King Goode et al., 2022). Conversely, the lack of variety in placement opportunities was perceived negatively by students in the development of broader skills; an example being repetitive placements in aged residential care (Ulenaers et al., 2021). The impact of student supervision and preceptorship ability to contextualise complex concepts to real-life clinical situations were particularly pertinent to addressing student clinical learning.

The COVID-19 pandemic has undoubtedly had a significant impact on education internationally. The disruption caused by the pandemic has led to changes in the way education is delivered, which in turn may affect student nurse attainment of competency. There is a need to understand the impact of these changes on the learning outcomes of the student nurse in the New Zealand context.

IV. LIMITATIONS

A limitation is that the review only utilised research from New Zealand and Australia. There was minimal research in New Zealand on the reformulation of nurse education during the COVID-19 pandemic. Of greater impact was the lack of research on student nurse to registered nurse for those who undertook Bachelor of Nursing education during the COVID-19 pandemic. No research was found about the impact and experience of learning clinical competency for student nurses in New Zealand during this period. Birks et al. (2011) highlight that tertiary education faculties undertake course curricula evaluation, however, these results are unpublished.

V. CONCLUSION

The sustainability of the nursing workforce is reliant on the transition of nurse graduates into professional practice. Further research focusing on clinical competency in relation to nurse education andragogy is needed if the profession is to continue to develop effective strategies to sustain future healthcare. This integrative review found that the COVID-19 pandemic has presented an opportunity to evaluate the myriad of clinical competency pathways offered as new graduates enter the workplace: it is important to be cognisant of the challenge of assessing clinical competency. There is a unique challenge to ensure that learning is authentic, and experiences relate to nursing situations. A key finding is the interrelatedness of clinical learning and exposure to the realities of nursing through clinical placements.

VI. RECOMMENDATIONS FOR NURSE EDUCATORS

It is important that nurse educators have an awareness of how healthcare delivery has changed and expanded in the post COVID-19 environment. This impacts directly on education and clinical training. Vital to the success of new graduates within the workplace is the linking of clinical teaching directly to ways in which optimal patient care is delivered. Development of new graduate nurses will be necessary to ensure approaches and techniques to healthcare service delivery are adapted that reflect the changing nature of healthcare delivery. More research is needed to further appraise such changes in relation too, not only optimal healthcare provision, but also to nurse education.

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