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# How Does the Proportion of Child-Specific Content of Pre-Registration Nursing Programmes in Higher Education Institutions Impact Upon Newly Qualified Registered Nurses' Perceptions of Preparedness to Care for Children, Young People, and Their Families? A Narrative Review Protocol

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## ABSTRACT

This paper presents a narrative review protocol to explore how the proportion of child-specific content of pre-registration programmes in universities impact upon newly qualified nurses' perceptions of preparedness to care for children, young people (CYP), and their families. The preparation and education to become a nurse who cares for children and young people differs from country to country. Providers of pre-registration nurse education offer routes into nursing from diploma to degree and in some countries post-graduate routes. The United Kingdom offers pre-registration programmes leading to qualifying as a children's nurse whereas programmes in countries such as the USA and Canada lead to a professional registration as a registered nurse with postgraduate study to specialize in areas such as pediatrics. The role of pre-registration nursing programmes is to facilitate preparedness for practice. Preparation for practice can include theoretical teaching and practice learning through simulation and face-to-face experience with countries requiring different numbers of practice hours to be completed. Although practice hours are central to nursing education, there is limited evidence on the impact and portion of child-specific content, including clinical learning in preparation of newly qualified nurses to care for CYP and their families. A preliminary search of Prospero, CINAHL, Medline and Cochrane Database indicates that there are no current or in progress reviews identified. The Population of interest, Exposure of interest, and Outcome framework were used to define the research question and inform the eligibility criteria. The review will consider different research designs if related to the research question. The search strategy will conform to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines for systematic reviews. Two independent reviewers will be involved in the screening process to determine the final studies for inclusion.

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newly qualified nursing;  
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Eligible studies will be assessed for methodological quality using the Joanna Briggs Institute critical appraisal tools. Extraction of study characteristics and data related to the research question will be extracted into a predefined table. Data synthesis will be conducted using a descriptive analytical approach to summarize extracted data.

## Introduction

Children's nurses as known in the UK or pediatric nurses in other countries such as the USA, Canada, and part of Africa and Europe are responsible for caring for the health and wellbeing needs of children, young people (CYP), and their families across a variety of healthcare settings (Glasper & Fallon, 2021). However, the preparation and education to become a children's nurse differs from country to country (World Health Organization [WHO], 2020b). The main provider of nursing education programmes is universities, which in the UK can be referred to as Higher Education Institutes (HEIs). There are several routes into nursing, starting at diploma, which are still offered in countries like the USA, Canada, and China (Baker et al., 2021; Deng, 2015). However, for many countries, the route into nursing is through baccalaureate undergraduate degrees, which has seen a global increase (WHO, 2020b). Countries offering baccalaureate degrees in nursing include Australia, New Zealand, China, Africa, the UK, and the USA (Baker et al., 2021; Deng, 2015). In the UK, there are now postgraduate routes into nursing. These include studying nursing to master's level (Wang et al., 2016) and in the UK opportunities for dual registration in two fields or specialisms of nursing that take students from a baccalaureate undergraduate degree through to a master's degree (Nursing and Midwifery Council, 2023a). In some countries, although less common, programmes lead to professional doctorates (American Association of Colleges of Nursing [AACN], 2023; Comiskey et al., 2015).

In many countries, such as China, Canada, the USA, and parts of Africa, undergraduate degree programmes lead to a professional registration as a registered nurse (RN) and the field or specialization of nursing being determined through experience or postgraduate study (World Health Organization [WHO], 2020a). For example, in Canada, students qualify as an RN and then gain experience in a specialist area, such as pediatrics which can lead to nurse practitioner programmes in specialist areas (National Association of Pediatric Nurse Practitioners [NAPNAP], 2023). This is similar in the USA with RNs able to take a certified pediatric nurse exam after several hours of experience in pediatric settings (Pediatric Nursing Certification Board [PNCB], 2023). In the UK, undergraduate degree and postgraduate pre-registration programmes are structured to prepare students to register in one of four fields of nursing: children's, adult, mental health, and learning disabilities (Glasper & Fallon, 2021). The curricula of these programmes are mapped against the standards for education laid out by the UK's Nursing and Midwifery Council (2023c), the governing body. These center on seven platforms within standards of proficiency for registered nurses (Nursing and Midwifery Council, 2018), the focus of which is on caring for patients across the lifespan. Within their standards, the NMC do not specify the degree of field-specific content but require HEIs to "design

and deliver a programme that supports students and provides exposure across all four fields of nursing practice” (p. 11) and “set out the content necessary to meet the programme outcomes for each field of nursing practice” (Nursing and Midwifery Council, 2023c, p. 11). Globally, the regulations and governing of the practice of nursing are managed by regulatory bodies. These regulatory bodies establish and enforce standards for conduct, education, and practice (International Council of Nurses, 2024). There is a great deal of diversity in the approach of these bodies, in terms of terminology, standards as well as the extent of control over educational requirements (National Council of State Boards of Nursing [NCSBN], 2020).

Vista et al. (2022) suggest that the role and focus of pre-registration nursing programmes is to facilitate the preparedness for practice of their students. However, they also argue that the concept of preparedness for practice is not clearly understood. AlMekawi and El Khalil (2020) liken this to readiness for practice and the attainment of relevant knowledge, skills, and professional standards that compare to the expectations of a competent nurse. Nakayama et al. (2008) view competence as action taken through combining knowledge, skills, values, beliefs, and experiences that students acquire as a nurse. Mrayyan et al. (2023) explored competence in relation to nursing practice as the capabilities of a professional to execute certain tasks or action, which derives from the necessary education and training needed to do this effectively. Therefore, competency within education as viewed by the American Association of Colleges of Nursing (2021) is “a process whereby students are held accountable to the mastery of competencies deemed critical for an area of study” (p. 4).

A key focus of undergraduate and postgraduate pre-registration nursing programmes is the importance of face-to-face clinical experience for achieving competence and preparation for practice. Vista et al. (2022) presented the argument that the exposure to clinical settings is a major factor in ensuring student nurses are prepared for practice. In the UK, the NMC adopt a standard of 2300 h in clinical practice during their pre-registration programme, which should make up 50% of pre-registration nursing programmes and ensure students experience the variety of practice needed to meet the needs of people across the lifespan (Nursing and Midwifery Council, 2023c). This differs from other countries such as New Zealand who require only 1100 h for student nurses to sit their State Finals leading to registration as a nurse (Nursing Council of New Zealand, 2024). Practice exposure is also an important factor in many countries as part of pre-registration nursing programmes (Fitzgerald & Konrad, 2021; Vista et al., 2022). Although practice learning remains central, the NMC do not state the degree of exposure needed for each field of practice leaving this open to interpretation. They do, however, inform HEIs that practice learning opportunities must ensure student nurses can develop and meet standards of proficiency to become a registered nurse (Nursing and Midwifery Council, 2023c). It is also clear more globally that the COVID-19 pandemic has resulted in reductions in education and clinical learning needed for the preparedness and competence of student nurses progressing toward registration (Fitzgerald & Konrad, 2021; Vista et al., 2022). The UK offers simulated practice learning that replicates, supports, or complements learning scenarios through various methods. Student nurses can then claim these to put toward their standard practice hours (Nursing and Midwifery Council, 2023b). What is less known is the impact and portion of child-specific content, including clinical learning and the impact on student nurses at the point of registration. A preliminary search of Prospero, CINAHL, Medline and Cochrane

Database for Systematic Reviews indicates that there are no current or in progress reviews identified.

## Methods

### *Review question*

How does the proportion of child-specific content of pre-registration nursing programmes in Higher Education Institutions impact on newly qualified registered nurses' perceptions of preparedness to care for children, young people, and their families?

### *Eligibility criteria*

The Population of interest, Exposure of interest, and Outcome (PEO) framework (Moola et al., 2015) were used to further define the focus of the research question and scope of the review (Table 1).

### *Inclusion criteria*

The inclusion criteria were derived from the PEO framework as follows:

- Peer-reviewed published research.
- Full-text articles available in English.
- Studies that include the perceptions, views, and beliefs of newly qualified nurses working with children, young, people from birth to 18 years of age and their families in their first year of practice.
- Studies that report the proportion, number, delivery, or timing of field-specific content.
- Studies that include undergraduate or postgraduate pre-registration nursing programmes leading to a recognized qualification as a children's nurse, pediatric nurse, child health nurse, or equivalent.
- Studies from 2016 onwards.

**Table 1.** Population of interest, exposure of interest, and outcome (PEO) framework.

Population of interest	The review will consider studies that include: <ul style="list-style-type: none"> <li>• The perceptions, views, and beliefs of newly qualified nurses working with children, young people and their families in their first year of practice.</li> </ul>
Exposure of interest	The review will consider studies that: <ul style="list-style-type: none"> <li>• Focus on pre-registration nursing programmes, including those at Diploma, Bachelorette degree, masters, and dual registration, provided by Higher Education Institutes.</li> <li>• Examine the proportion, style, number, method, mode of delivery or timing of content specific to children and young people, including but not limited to field specific, shared content, shared learning, or specialist education.</li> </ul>
Outcome	The review will consider studies that: <ul style="list-style-type: none"> <li>• Consider the impact of the proportion of child specific content on perceptions of preparedness, but not limited to readiness, competence to care for children, young people, and their families.</li> </ul>

As a benchmark, the review will only consider studies from the last 8 years, which marks the introduction of UK wide standards set out by the Nursing and Midwifery Council (2018) and encompasses other countries, such as New Zealand who received amendments to their competencies for registered nurses in 2016 (Nursing Council of New Zealand, 2016).

### ***Exclusion criteria***

- Studies that are not published in English as there is no capacity for translation.
- Studies will be excluded that consider the type, style, method, or mode of delivering field-specific content.
- Studies will be excluded that consider who is responsible for delivering the content.
- Studies where there is no focus on pre-registration education.
- Studies that do not include child-specific content.
- Studies will be excluded that solely focus on content-related neonatal nursing, which has its own specialist training and environment.
- Grey literature.

Studies that are not published in English will be excluded, as there is no capacity for translation. This will be reported as a limitation of the review and reference made to these as potentially eligible non-English studies not included in the full review.

### ***Types of studies for inclusion***

The review will consider qualitative, quantitative, and mixed methods studies. Qualitative literature across a variety of designs will be considered. The quantitative designs that will be considered for inclusion will be intervention studies (for example, pre-post-implementation of educational interventions), observational studies, including prospective and retrospective cohort studies, cross-sectional studies, case series, and individual case reports. Systematic and other literature reviews will also be considered if related to the research question for screening of their reference lists to identify any papers not found during the search strategy. Any identified systematic and other literature reviews will not be included in the final review itself.

### ***Search strategy***

The search strategy is designed to identify published and unpublished studies. The following steps within the search strategy will be adopted. Firstly, an initial limited search of CINAHL and Medline was undertaken by two independent authors in July 2024 to identify studies on the topic (Appendix). Consensus was reached between the two reviewers and the search terms that were included in the title or abstract of relevant articles and index and MESH terms to describe these articles were used to develop a full search strategy (Table 2) (Siddaway et al., 2019). These text, keywords, index terms will be applied to each of the chosen databases, MESH terms within Medline or sources of information in the full review. The authors will conduct a manual search of the reference lists of all eligible studies identified through the search.

The data sources to be searched will include the following:

**Table 2.** Search terms.

Population of interest	New* qualified OR new graduate* OR new registrant OR child* nurs* OR pediatric nurs* OR pediatric nurs* OR specialist child* nurs*
Exposure of interest	Pre-registration OR undergraduate OR post graduate OR freshman OR sophomore AND nurs* education OR nurs* programme AND proportion OR number OR delivery OR timing AND field specific OR child specific OR shared content OR shared learning OR specialist education AND higher education Institut* OR educational institut* OR academic institut* OR Universit* OR college of higher education
Outcome	Prepared* OR readiness OR competen* OR proficien*

- CINAHL
- Cochrane Library
- Embase
- MEDLINE via EBSCOhost
- Joanna Briggs Institute
- ProQuest
- PubMed
- ERIC
- Google Scholar

### **Study selection**

The search strategy will conform to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines for systematic reviews (Page et al., 2021). The citation management system Rayyan will be used to store the references following the search strategy and duplicates will be removed. Two independent reviewers will screen title and abstracts and any relevant studies retrieved for full review. A full-text review will be undertaken to determine the final eligibility for inclusion. The reasons for excluding full-text studies will be included as an Appendix. Any discrepancies that arise in the study selection process will be discussed by the two reviews and if no consensus can be reached, then eligibility will be decided by the research team. The results of the study section along with rationale for inclusion and exclusion will be reported and presented in a PRISMA flow diagram to ensure study reproducibility.

### **Assessment of methodological quality**

Following selection, included articles will be critically appraised using the Joanna Briggs Institute standardized critical appraisal instruments (Aromataris & Munn, 2020). This will be conducted by two independent reviewers to assess for methodological quality. Any disagreements will be discussed and resolved by a third reviewer if necessary. All studies regardless of their methodological quality will be included in the data extraction and synthesis phase of the review. Methodological quality of included studies will be reported.

### **Data extraction**

Two reviewers will independently examine the full texts of the final included articles to extract article information and outcomes related to the research question into a predetermined table (see [Textbox 1](#)). It is expected that a variety of outcomes will be reported and not all are likely to



**Textbox 1.** Article information and data to be extracted.

General information study characteristics:

- Year of publication
- Country of study
- Type(s) and duration of nursing programme/education if applicable
- Methodology
- Sample size and characteristics
- Data collection methods

Outcome:

- Impact on perceived preparedness for practice of the population and not limited to: Feelings, beliefs, and readiness of perceived preparedness for practice.
- Experience or experiences of population that lead to perceived preparedness for practice.
- Factors that impede preparedness for practice.
- Perceived competence or proficiency.
- The proportion of content provided.
- Number of hours and timing of theory and practice content specific to children in young people.

be anticipated. Therefore, any relevant outcomes, which are not included within the predetermined table, will be included and discussed in the final review. Any discrepancies between the two reviewers will be resolved through discussion with a third reviewer if necessary.

**Data analysis and synthesis**

Due to the structure of the research question, it is anticipated that a variety of research designs may be included that report a variety of measures and reported outcomes that would make it impossible to complete a meta-analysis or meta-synthesis of the included studies. For this reason, a descriptive analytical approach will be used to summarize extracted data. It has been presented in the literature that systematic and narrative reviews form the two main approaches to extracting and analyzing the literature (Turnbull et al., 2023). Systematic reviews adopt structured methods toward data analysis utilizing meta-analysis to produce generalizable findings, which form the basis of recommendations to help shape practice, referred to as probabilistic truth (Greenhalgh et al., 2018). Conversely, narrative reviews, dealing more with plausible truth, must authentically represent the underpinning evidence and demonstrate how this is drawn together to inform the findings (Turnbull et al., 2023). However, narrative techniques used for data extraction and synthesis can be combined with systematic techniques for searching and appraising the available evidence related to a research question (Dixon-Woods et al., 2004). Narrative systematic reviews exist that present the structured methods to retrieve relevant studies but adopt or present a narrative approach to data synthesis to summarize and explain findings when meta-analysis is not possible due to non-comparable research designs (Neill et al., 2015).

Narrative reviews are often useful for some topics that are complex or too broad that require meaningful synthesis of research evidence that can be achieved through detailed description and interpretation (Sukhera, 2022). Analysis can vary within narrative reviews; therefore, careful consideration is needed regards to analysis and interpretation. For the current review, the data to be extracted, as presented in textbox 1, will act as a model to guide the type of data needed for extraction. From these data, we can group together and synthesize similar outcomes and further look to establish relationships within data sets. An initial data extraction table will be created to present the characteristics of included studies.

Outcomes that provide qualitative data will be analyzed and synthesized using meta-aggregation. The process of meta-aggregation is achieved through the synthesis of findings across included papers to generate a set of statements representing the aggregation of assembled findings. These findings are classified into categories based on their similarity. In the final stage, these categories are further aggregated into synthesized findings (Lockwood et al., 2015). The process of meta-aggregation can be used to enable generalizable synthesized findings and their statements in the form of recommendations to inform future practice and further research (Hannes & Lockwood, 2011).

Quantitative data regarding the proportion and number of hours and timing of child-specific theory and practice that can be linked to perceptions of preparedness for practice will be grouped together and presented in a table.

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## Author contributions

The protocol was drafted by MC with iterative input and revisions from DE, JB, MF and SN.

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## Appendix. Example of initial search via CINAHL and MEDLINE, conducted 19<sup>th</sup> July 2024

Search: CINAHL	Number
S1: New* qualified OR new graduate* OR new registrant OR child* nurs* OR pediatric nurs* OR pediatric nurs* OR specialist child* nurs*	45,272
S2: Pre-registration OR undergraduate OR post graduate OR freshman OR sophomore AND nurs* education OR nurs* programme AND proportion OR number OR delivery OR timing AND field specific OR child specific OR shared content OR shared learning OR specialist education AND higher education Institut* OR educational institut* OR academic institut* OR Universit* OR college of higher education	830,691
S3: S1 AND S2	6,690
S4: Prepared* OR readiness OR competen* OR proficien*	199,204
S5: S3 AND S4	1,357
S6: S5 AND 2016[date-publication] AND English [Language] AND Peer Reviewed	95

Search: MEDLINE	Number
S1: New* qualified OR new graduate* OR new registrant OR child* nurs* OR pediatric nurs* OR pediatric nurs* OR specialist child* nurs*	69,298
S2: Pre-registration OR undergraduate OR post graduate OR freshman OR sophomore AND nurs* education OR nurs* programme AND proportion OR number OR delivery OR timing AND field specific OR child specific OR shared content OR shared learning OR specialist education AND higher education Institut* OR educational institut* OR academic institut* OR Universit* OR college of higher education	19,849,576
S3: S1 AND S2	41,186
S4: Prepared* OR readiness OR competen* OR proficien*	881,514
S5: S3 AND S4	4,339
S6: S5 AND 2016[date-publication] AND English [Language] AND Peer Reviewed	194