

Review

The use of long-arm (indirect) supervision for nursing, midwifery and allied health professionals in health and social care settings: A systematic literature review

Rebecca Dew^{a,*}, Alison James^d, Teresa Burdett^a, Donna Griffin^a, Joanne Hirdle^a, Sonya Chelvanayagam^a, Amanda Watson^a, Vanessa Heaslip^{b,c}

^a Faculty of Health and Social Sciences, Bournemouth University, UK

^b School of Health and Society, University of Salford, UK

^c Department of Social Sciences, University of Stavanger, Norway

^d School of Nursing and Midwifery, University of Plymouth, UK

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ABSTRACT

Background: Internationally, critical shortages of healthcare workers have been reported. Indirect supervision is one educational approach which has the potential to expand placement opportunities for the future healthcare workforce. However, its use across healthcare professions is yet to be systematically reviewed.

Objectives: To evaluate the use of indirect supervision across nursing, midwifery and allied health professionals in health and social care settings.

Design: Systematic review.

Review methods: Searches in six databases (CINAHL, MEDLINE, APAPsych Info, Web of Science, Scopus and PubMed) were conducted. Grey literature and handsearching were also conducted. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used for this review. A total of 493 titles and abstracts were screened. The quality of the included studies was evaluated using the Quality Assessment with Diverse Studies (QuADS) tool.

Results: A total of 25 articles were included. Three overarching themes were identified: (1) Professional identity, (2) Educational approaches and (3) Educational outcomes. Approaches to what constitutes indirect supervision varied widely and inconsistencies were found in the reporting of the placement model. Supervision, support and preparation were perceived as vital for positive outcomes of these placements. Higher levels of learning were reported, although challenges were also discussed.

Conclusions: This review highlights the variability in approaches to indirect supervision. Positive perceptions around using indirect supervision in health and social care settings has been widely reported, however further research is warranted to explore this across professions.

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1. Introduction

It is globally recognised that supervision and assessment on placement are key to student learning and growth, meeting statutory and regulatory requirements as well as forming professional and personal

identity (Clarke et al., 2015b). Student supervision and assessment of clinical practice is an integral part of health professional preparatory educational programmes. The proportion of time spent in practice differs across the globe; for example, pre-registration nursing students in the United Kingdom (UK) must complete 2300 h in clinical placements

* Corresponding author at: Bournemouth Gateway Building, 10 St Pauls Lane, BH8 8GP, UK.

E-mail addresses: rdew@bournemouth.ac.uk (R. Dew), alison.james@plymouth.ac.uk (A. James), tburdett@bournemouth.ac.uk (T. Burdett), dgriffin@bournemouth.ac.uk (D. Griffin), jhirdle@bournemouth.ac.uk (J. Hirdle), schelvanayagam@bournemouth.ac.uk (S. Chelvanayagam), amandaw@bournemouth.ac.uk (A. Watson), v.a.heaslip@salford.ac.uk (V. Heaslip).

@beckyrdew (R. Dew), @donnagriffinbu (D. Griffin), @JHirdleBU (J. Hirdle), @Schelvanayagam (S. Chelvanayagam), @amandawatsonbu (A. Watson), @HeaslipVanessa (V. Heaslip)

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(NMC, 2023a), whereas it is 800 h in Australia (ANMAC, 2019). Within the allied health professions, occupational therapy students for example, must complete a minimum of 1000 h to meet the Royal College of Occupational Therapists' (RCOT, 2019) and the World Federation of Occupational Therapists' requirements (WFOT, 2016) which is more aligned with the educational requirements for Canadian physiotherapy students who undertake 1025 h (CCPUP, 2019). However, there is no set standard or recommendation for the frequency, format or number of proportional hours of supervision in practice placements.

In recent years, nursing and midwifery supervision has evolved from the traditional one-to-one supervision model to a variety of emerging models including Collaborative Learning in Placement (CLIP) (Lobo and Kenward, 2021), Hub and Spoke, Virtual, and Simulation. However, due to different professions' regulatory frameworks, indirect supervision has not always been possible in all healthcare professional placements until recently. Literature on indirect supervision is predominantly reported from the fields of occupational therapy, physiotherapy and pharmacy (Beveridge and Pentland, 2020). Indirect supervision has various synonyms in the literature – including “long-arm” or “role-emerging” (NMC, 2023b), and these terms may be used interchangeably within this paper. Likewise, within allied health professions, it is regarded that supervision does necessarily not have to take place in physical proximity.

Long-arm or indirect supervision can be defined as a practice-based learning model where student learning takes place in an organisation which is unfamiliar with the role of the student's profession (RCOT, 2019). Students are therefore assigned a long-arm supervisor (from their own profession) as well as an on-site supervisor or nominated person in practice. The role of the practice educator (long-arm supervisor) is defined by the RCOT (2019) as “having responsibility for facilitating profession-specific learning through long-arm supervision”, rather than support being provided by on-site staff who are not registered or unfamiliar with the profession's principles.

The model specifies that the long-arm supervisor is located at a distance to the clinical practice learning area, but is available for support for the placement student, whilst a named member of on-site staff provides day-to-day support (NHS Employers, 2024). Long-arm supervision may therefore take place in a variety of ways including face-to-face meetings or remote communication, including video call, email, telephone or other means (HCPC, 2023a). Within the UK, The Nursing and Midwifery Council offer guidance to support indirect supervision and thus supports the benefits of this model since its recent introduction to the field of nursing (Knight et al., 2022). Long-arm (indirect) supervision for nursing and midwifery can be defined as an “appropriately identified placement with no registered practitioners where supervision may be undertaken daily by a nominated person, but the overall process and assessments are overseen by appropriately prepared and qualified registrants” (NMC, 2023c). Remote supervision suggests that a supervisor will be available to provide guidance but will not directly oversee the tasks being undertaken. Long-arm supervision can provide many benefits such as increasing placement expansion from traditional areas which may not have the workforce capacity to provide appropriate supervision. As it is most likely used where the student is the only practitioner in the service or locality (RCOT, 2019), it offers the possibility to expand the diversity of practice across a broader spectrum of fields, whilst also increasing student knowledge, independence and practice in new areas. For the purpose of this review, articles will focus on long-arm supervision models specifically where the on-site supervisor (or nominated person in practice) is not a registered professional in the student's field.

Within nursing and midwifery in the UK, the Standards to Support Supervision and Assessment (NMC, 2023b), have increased the flexibility to enable the opportunity to develop indirect supervision models for student placements. This reflects an alignment with the RCOT (2019) and HCPC (2023b) who recognise the range of health and social care placements and that learning can be supported in more diverse settings.

The global shortage of nurses, midwives and allied healthcare professionals is well documented (Buchan and Catton, 2023; WHO, 2020).

However, indirect supervision has the potential to increase placement capacity and expand the areas that the profession can reach, which is important at a time where it is recognised that there is a shortage of “traditional” clinical placements (Knight et al., 2021). Placements can also include third sector and voluntary organisations which in turn can also increase the students' understanding of integration between health and social care settings and offers the opportunity to diversify students' experiences.

2. Background/literature

Internationally, healthcare systems are undergoing changes in response to the global demand-supply gap in the nursing workforce, which has been dubbed by the International Council of Nurses as a global health emergency (Buchan and Catton, 2023). In the UK specifically, a paradigm shift towards an integrated care model fostering greater connection between multidisciplinary teams requires increased knowledge of health services outside of “traditional” settings (Baxter et al., 2018; Coughlan et al., 2020).

Indirect supervision has been successfully used in various allied professions globally, including the UK, Australia, Canada and the USA, with the most prominent sectors being occupational therapy, physiotherapy and social work (Beveridge and Pentland, 2020). Literature on indirect supervision in occupational therapy report role-emerging placements being used since 1970s (Bossers et al., 1997), however indirect supervision has been used with varying formats globally. For example, a health promotion approach has been incorporated into French curricula where students learn on placement, assigned an on-site nominated referee, however assessment occurs entirely at the academic institution without placement visit (Le Roux et al., 2021).

The adoption of indirect supervision has been slower within the field of nursing and midwifery, as until recently only nurse/midwifery registrants have been qualified to supervise and assess students, primarily on a one-to-one basis. However, in the UK following revisions of the NMC regulations (NMC, 2018), models of supervision and assessment have been revised and indirect supervision is now possible through non-registered experts, providing they are supported by registered nurse supervisors and assessors, and placements meet the required quality assurance and standards. In nursing, students are assessed by a registered nurse with appropriate equivalent experience for the student's field of practice, and midwifery students are assigned to a registered midwife, however supervision may be overseen by any nurse or other registered health and social care professionals (NMC, 2023a). In occupational therapy and physiotherapy, practice educators may carry out both supervision and assessment roles but must undertake regular training which is appropriate to their role, learners' needs and the delivery of the learning outcomes of the programme (HCPC, 2017).

Clarke et al. (2016) reported the value of role-emerging placements as a solution to the ongoing placement ‘crisis’ (Mattila et al., 2018; Williamson et al., 2020) pervading healthcare professions. Benefits such as increased learning opportunities, variety of settings/experiences, and personal and professional growth have also been reported (e.g. Clarke, 2012). Thew et al. (2018) and Clarke (2012) also suggested that such placements can influence potential career aspirations and opportunities. However, literature on role-emerging placements (using indirect supervision) has also reported concerns regarding supervision, placement settings and support (Linnane and Warren, 2017). Mixed reviews on indirect supervision are therefore apparent in the literature. Despite the need for clinical placement expansion, to which indirect supervision models could be key, there is however a lack of literature systematically evaluating indirect supervision. This is in part due to its infancy in certain health professions such as nursing. Although Beveridge and Pentland (2020) presented a comprehensive review of varying supervision models, literature focusing specifically on reviewing indirect supervision models is scarce. This systematic review will focus on role-emerging and indirect supervision in nursing, midwifery and allied

health student placements to address a gap in systematic analysis of the current literature. The aim of this systematic review will address two key research questions: (1) What constitutes Long Arm Supervision in Health and Social Care Settings? and (2) How is it perceived by nursing, midwifery and allied health professional students and those supporting them?

3. Methods

This systematic review was performed following the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (See Supplementary material, Appendix 2). The protocol for this review was registered with the international prospective register of systematic reviews (PROSPERO) in accordance with PRISMA-P guidelines (PROSPERO CRD42023418302).

3.1. Step 1: Identifying the research question

The research aimed to gather evidence from current literature on indirect supervision placements in nursing, midwifery and allied health settings. The research questions that guided the review were (1) what constitutes long-arm supervision in health and social care settings? and (2) how is it perceived by nursing, midwifery and allied health students, and those supporting them?

3.2. Step 2: Defining eligibility

The search criteria specified publication dates to be between the years 2012–2023, published in a peer-reviewed journal and written in English language. Any articles outside of this time frame, were not peer-reviewed, conference abstracts, commentaries or opinion pieces were excluded. Articles found to have insufficient focus on indirect supervision models were also excluded. See Table 1 for inclusion/exclusion criteria.

3.3. Step 3: Search strategy and study selection

3.3.1. Search strategy

An initial literature search was conducted on 13th September 2023 using six databases: CINAHL, MEDLINE, APA Psych Info, Web of Science, Scopus and PubMed to identify relevant articles published between 2012 and 2023.

Synonyms and related terms denoting the placement supervision model were connected by Boolean operators (“AND” and “OR”). Searches were carried out using combinations of the following keywords: ‘long-arm’ OR ‘long arm’ OR ‘role-emerging’ OR ‘role emerging’ AND ‘non-traditional’ OR ‘fieldwork’ OR ‘supervis*’ OR ‘placement’ OR ‘indirect supervision’ as detailed in Supplementary material, Appendix 1. These search terms were decided after scoping existing literature to identify which terms were being used for models using indirect supervision in settings where the student’s profession was not represented. We searched broadly across professions and then filtered during stages 1 and 2 of the screening process to include papers in nursing, midwifery and allied health professionals. Grey literature and handsearching of reference lists in relevant publications were conducted to scope additional articles which were not retrieved in electronic searches.

3.3.2. Study selection

All search references were checked for duplicates and exported to RAYYAN (a programme which assists in undertaking systematic reviews by facilitating independent blind review) for screening, before conducting a two-stage review process. Once articles were uploaded, RAYYAN was used to facilitate independent blind screening of articles at stage 1 and 2, allowing reviewers to log justifications for exclusion and inclusion of each article and facilitated discussions at third review. Two reviewers independently conducted phase 1 screening (title/abstract) of

Table 1
Eligibility criteria.

	Inclusion	Exclusion
Population	Studies involving nursing, midwifery and allied health professional students (including Registered Nurse Degree Apprenticeship students, nurse associates, BSc, MSc, etc.), those supporting students on long-arm and/or role-emerging placements	Studies involving predominantly professions outside of nursing, midwifery and allied health professional students (such as social work, clinical psychology), or studies where the participant split between professional groups is unclear Studies involving working professionals as opposed to students Post-registration students who are working towards higher qualification(s)
Intervention	Long-arm or role-emerging placements, indirect supervision	Distance or telesupervision* which did not involve long-arm supervision, role-established placement settings**
Outcome	Studies on perceptions and experiences of students and those involved in the wider support process of long-arm placements	Studies without narrow/sufficient focus on long-arm supervision or role-emerging element in order to extract enough meaningful / relevant data
Study design	Quantitative, qualitative, mixed methods e.g. via focus groups, reflective logs, interviews, questionnaires	Reviews, book chapters, manuals, reports, opinion pieces, editorials, case reports, conference proceedings, articles not presenting primary research, not peer-reviewed, MSc theses, PhD theses.
Other	Studies in English language only	Studies published in languages other than English

* Telesupervision refers to supervision carried out using the internet as a training medium for supervisees (Grames et al., 2023).

** Role-established placement settings involve a discipline-specific registered professional directly supervising a student on-site and where the profession is already established within the service (Bossers et al., 1997, Overton et al., 2009).

studies for eligibility/inclusion. If an article did not have an abstract, the full text was screened. Screeners independently reviewed the first 20 articles and met for discussion to ensure consistency in exclusion reasons, before continuing to screen the remaining articles independently. Following discussion of all articles, the screeners then met with a third author to review articles requiring a third opinion regarding inclusion/exclusion. Queries were predominantly based on focus of article or clarity of terminology, and reviewers discussed and reached a consensus based on original specified inclusion/exclusion criteria and research questions. In cases where queries could not be resolved by abstract alone, the articles were included for phase 2 full-text review. To ensure quality and consistency of exclusions, three authors who were not involved in the main screening process then independently screened 10 % of excluded papers and agreed with exclusion reasons. Sixty papers were included from phase 1 screening, following third review and exclusion checks, and proceeded to phase 2 full-text review. The same screeners conducted full-text review, following the same process as phase 1, and met with third reviewer to discuss uncertainties regarding inclusion. 10 % of the papers excluded at phase 2 were then also verified for exclusion by two authors to ensure consistency. 25 articles were included for analysis following phase 2 full-text review.

Papers were quality-assessed using the Quality Assessment with Diverse Studies (QuADS) tool (Harrison et al., 2021) for appraising methodologically diverse research studies. The QuADS tool includes 13 criteria (possible score between 0 and 3, with 3 being the highest quality). Quality assessments were conducted by three authors, where each individual scored each paper on the set criteria and agreed a joint score per criterion per paper. No papers were excluded based on quality assessment, but overall scores are displayed in the data extraction table

for transparency. Papers that scored 30+ were identified as high quality, papers that scored 14–29 were medium quality and papers that scored ≤ 13 were identified as low quality according to the QuADS criteria (for details on scoring criteria see Supplementary Material, Appendix 3).

3.4. Step 4: Data extraction

Following inclusion of 25 articles, data was extracted and summarised using the following headings: Author, Country, Aim, Professional Group, Placement Setting, Methods, Findings and Quality Appraisal (QuADS) Score. See Table 2 for data extraction table.

3.5. Step 5: Data synthesis/analysis process

Three authors conducted data synthesis using Braun and Clarke's (2022) reflexive thematic analysis (see Fig. 1). This approach was used as the articles retrieved were predominantly qualitative, therefore allowed capturing of the rich yet complex detail in each study (Braun and Clarke, 2006). Articles were divided equally between the authors where each author was responsible for analysing data within their assigned articles (phase 1–3), before jointly synthesising and discussing data, and then reviewing and refining themes across all articles (phases 4 and 5). Data items were grouped into themes and all articles were then jointly revised in order to refine themes and re-assign codes to answer the two research questions. Once agreed, they presented the themes and sub-themes to the wider research team.

4. Results

Our research questions aimed to address two key aspects:

- (1) What constitutes Long Arm Supervision in Health and Social Care Settings?
- (2) How is it perceived by nursing, midwifery and allied health professional students and those supporting them?

Following screening of 493 articles, 25 were included in our final analysis. See Fig. 2 for a diagram representing screening results. Of the 25 articles, the 3 professional areas were as follows: Occupational therapy (19), Pharmacy (4) and Physiotherapy (2). Although the focus for this systematic review included nursing and midwifery, allied health professionals were the most prevalent professional group. No literature within the nursing or midwifery professions identified at the time of searching. Articles predominantly used qualitative methodologies, where 16 articles were qualitative, 4 were quantitative, and 5 used mixed methods. All studies involved a placement using long-arm supervision and predominantly reported feedback from students, although 7 of these also explored supervisor feedback. A further 2 studies looked at retrospective perceptions from graduates who had undertaken a role-emerging placement and 4 studies included perceptions from other professionals and/or individuals who worked with students on placement. The placement settings varied widely across studies but included: elderly and long-term care services, day hospital and community services; HIV services, educational or childcare settings, charities, homeless services (see data extraction Table 2 and placement details Table 3). Geographically, most articles originated in English-speaking countries: 11 United Kingdom, 5 Canada, 3 Israel, 2 USA, 2 Australia, 1 Republic of Ireland and 1 Switzerland. The quality of the included studies was assessed by the QuADS. Total scores varied between studies and ranged from 6 to 30, with 3 papers identified as high quality, 18 as medium and 4 as low quality. No studies were excluded based on QuADS scores, see Table 2 for total scores.

At phase 1 of screening, 328 articles were excluded in accordance with our exclusion criteria listed in Table 1. This included various reasons such as non-relevant topic/focus, conference abstracts or presentations, duplicate articles, articles not presenting primary research,

wrong publication type (editorials, opinion pieces, theses, books and book chapters, wrong population (i.e. not in the nursing, midwifery or allied health professions), insufficient focus on long-arm or indirect supervision, and the abstract being irretrievable. A further 29 articles were excluded at phase 2 in accordance with our exclusion criteria, detailed in Fig. 2.

In response to our first research question exploring what constitutes indirect supervision, great variation was found across models considered to be using indirect supervision in the literature (see Table 3 for further details). All articles showed similarities in terms of having a named supervisor and the students' profession was not represented or established at the placement site. However, variations were noted in several areas meaning that there was no universal approach. Firstly, where specified, placement durations varied from 4 weeks to 12 weeks and hours varied from full-time to part-time. Additionally, where reported, there was no common time allocation to supervision, with supervision varying from between 1 and 3 h (e.g. Dancza et al., 2019), to 20–25 h (e.g. Withers et al., 2022). Furthermore, the number of students at each placement site varied, with some supervision models also using peer-assisted learning where students were placed in groups of 2 or above. There was also a range of settings used for placement sites (see data extraction Table 2 and placement details Table 3). The location of supervision differed between articles, where some took place at placement settings, and others off-site or at the student's educational institution. Furthermore, some articles reported how contact and support took place outside of supervision hours, however this detail was not consistently reported. The variety in responses and detail of what constituted placements using indirect supervision was poignant as all of these points are relevant for assessing the suitability of a service becoming a placement under the indirect supervision placement model. Variation was also noted in the level of detail reported/specified by authors across the research, and therefore we were unable to analyse all constitutional areas of indirect supervision models in every article. See data extraction Table 2 and placement details Table 3 for full information.

Due to the complexity in analysing perceptions across the literature, a structured approach using Braun and Clarke's (2022) thematic analysis approach was used to address the second research question of how indirect supervision is perceived by nursing, midwifery, and allied health professional students, as well as those supporting them. Through thematic analysis, three key themes in relation to perceptions were identified across the literature: (1) Professional identity, (2) Educational approaches, and (3) Educational outcomes, which will be detailed in the following sections.

4.1. Professional identity

The theme of professional identity was clearly identified by the papers discussed in this review and perceptions were divided into four areas: promoting role, confidence and autonomy, legacy and mutual benefit and student expectations.

The aspect of promoting role as part of their professional identity was cited by a number of papers (Clarke et al., 2015a, 2015b; Gat and Ratzon, 2014; Golos and Tekuzener, 2021; Kaelin and Dancza, 2019; Linnane and Warren, 2017; Mantzourani et al., 2016; Mattila and Dolhi, 2016; Sharmin et al., 2016; Thew et al., 2023). Clarke et al. (2015a) discussed how the students felt an increased responsibility to represent their profession (OT) and Sharmin et al. (2016) talked about how a light was shone on the role of the occupational therapist. However, Withers et al. (2022) suggested that clarity was required as the role of the students was not understood.

Perceptions around the development of confidence and/or autonomy throughout the placement were cited by a number of the reviewed papers (Clarke et al., 2019; Clarke et al., 2015a, 2015b; Clarke et al., 2014; Kaelin and Dancza, 2019; Knightbridge, 2014; Kyte et al., 2018; Linnane and Warren, 2017; Mantzourani et al., 2016; Syed and Duncan, 2019; Thew et al., 2023; Withers et al., 2022). However, although Mattila and

Table 2
Data extraction.

**QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.*

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
Boniface et al., 2012	United Kingdom (England)	To investigate students' and supervisors' experiences of peer-assisted learning and long-arm supervision in a role-emerging placement	Occupational Therapy	Residential care home for older adults	Qualitative; semi-structured interviews Students ($n = 4$), Supervisors ($n = 2$)	Four themes emerged: the need for preparation, negotiating relationships, support needs and the value of experiential learning. Peer-assisted learning had positive and negative influences. Positive impact on personal and professional development.	13
Clarke et al., 2019	United Kingdom (England)	To investigate student experiences of role-emerging placements	Occupational Therapy	Substance misuse rehabilitation centre, young person's mental health charity, community forensic team, homeless service or a refugee service	Qualitative - IPA; Semi-structured interviews Students ($n = 5$)	Students need to be encouraged to use and develop a range of strategies to overcome challenges of role-emerging placements	30
Clarke et al., 2015a	United Kingdom (England)	To gain a deeper understanding of occupational therapy students' experiences of role-emerging placements; focusing on the theme of 'Thrown in' from Clarke (2012) PhD thesis.	Occupational Therapy	Same as above	Qualitative - IPA; Semi-structured interviews Students ($n = 5$)	The early stages of placement were cognitively, emotionally and ontologically demanding for students, which also impacted students' sense of self.	24
Clarke et al., 2014	United Kingdom (England)	To gain a deeper understanding of occupational therapy students' experiences of role-emerging placements; focusing on the theme of 'Awareness of change' from Clarke (2012) PhD thesis	Occupational Therapy	Same as above	Qualitative - IPA; Semi-structured interviews Longitudinal approach (6+ months after) Students ($n = 5$)	Role-emerging placements catalysed the students' ontological development, therefore their understanding of self and occupational therapy as a profession. By engaging in challenging and autonomous learning experiences, students developed deeper insights into who they were becoming as professionals, leading to a professional identity of their own making.	15
Clarke et al., 2015b	United Kingdom (England)	To gain a deeper understanding of occupational therapy graduates' experiences of role-emerging placements and the influence of these placements on their professional practice and development once qualified.	Occupational Therapy	Same as above	Qualitative - IPA; Semi-structured interviews Graduates ($n = 5$)	Graduates reported mixed views concerning the extent to which the professional identity they developed within their role-emerging placements could be sustained in practice. This was more apparent in National Health Service settings, where graduates questioned the congruency of their practice with the professional understandings and ways of being they had developed on placement.	22
Dancza et al., 2019	United Kingdom (England)	To evaluate learning experiences of students from both supervisor and student perspectives over the placement duration	Occupational Therapy	School-based placements: primary and secondary schools including a mainstream primary school, a primary school for fostered children, a secondary school specialist communication unit,	Qualitative - Template Analysis (TA); Action research methodology using reflective field notes, placement documentation and semi-structured interviews. Students ($n = 14$); Supervisors ($n = 11$)	Limited established occupational therapy procedures and role models meant that the students created and used knowledge differently. The procedural knowledge upon which students most heavily relied in previous	23

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Table 2 (continued)

**QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.*

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
				and a specialist secondary residential school for looked-after children		placements was largely inaccessible to students. Students relied on occupational therapy conceptual and dispositional knowledge, with the support of their peer and supervisor to guide practice. Tensions were seen between providing a service for the school and taking the necessary time to understand and implement the occupational therapy process systematically. Four key themes emerged: (1) adapting to less doing, more thinking and planning; (2) understanding the complexity of collaboration and making it work; (3) emotional extremes; and (4) realising and using the occupational therapy perspective.	
Dancza et al., 2013	United Kingdom (England)	To investigate the enablers and barriers to learning from the perspectives of students on role-emerging placements from two European universities.	Occupational Therapy	School-based placements: a specialist communication centre in a mainstream secondary school, a small village mainstream primary school or a special primary and secondary school for fostered children.	Qualitative – Thematic Analysis; Semi-structured interviews Students ($n = 10$)		18
Fanelli and Nadeau, 2022	United States of America	To investigate non-OT professionals' views regarding the profession and their perceptions of occupational therapy in a non-traditional fieldwork setting	Occupational Therapy	Participants came from a variety of backgrounds including: nursing, sociology, social work and early education.	Qualitative analysis; Semi-structured interviews Non-OT professionals working with role-emerging students ($n = 8$)	Six themes were identified: occupational therapy as a holistic/client-centred profession, individual professional growth, common skills of an occupational therapist, benefits of occupational therapy, student preparation, and sustainability of services. Results suggested that non-traditional fieldwork heightened awareness of the profession and marketed its value in community-based psychosocial settings.	18
Gat and Ratzon, 2014	Israel	To examine whether students' perceptions regarding their professional and personal skills differed depending on whether they completed community fieldwork versus traditional fieldwork. A further aim was to examine whether perceptions would differ depending on whether an active occupational therapist was present at the site.	Occupational Therapy	Not reported	Quantitative; Questionnaires Students ($n = 48$), of which 7 were in role-emerging community placements.	Students who completed placements without an active occupational therapist on-site scored significantly higher in their perception of their personal responsibility, cultural competence, and overall personal skills. This study indicates the value of using various supervisory strategies for placements.	16
Golos and Tekuzener, 2019	Israel	To explore students' perceptions, expectations, and satisfaction levels in relation to their placements before and after completion. Specifically, we aimed to examine: (1)	Occupational Therapy	Various practice areas including paediatrics, mental health, physical, and geriatrics.	Quantitative; Pre- and post- questionnaires Paired <i>t</i> -tests and two-way repeated measures analyses of variance (ANOVA) were used to examine the change in scores over time, and a-parametric tests to	For all students a significant decrease in scores was found from pre- to post-placement regarding setting and supervision and a significant increase in scores was found from pre- to postplacement	24

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Table 2 (continued)

*QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
		students' expectations prior to placement, compared with their levels of satisfaction with setting and supervision after completion of placement; and (2) students' perceptions before and after completion of placement regarding their personal and professional skills. Additionally, two models of practice placement (role-established, role-emerging) were compared.			compare the two models. Students ($n = 155$)	regarding personal and professional skills. Comparison between placement models indicated nonsignificant differences regarding personal and professional skills. However, role-established post-scores were significantly higher than role-emerging scores regarding setting and supervision, but significantly lower regarding the contribution of services to the community.	
Golos and Tekuzener, 2021	Israel	To examine the experiences of students and supervisors in community-based role-emerging practice placements, and to compare the two types of placements (full-time and part-time).	Occupational Therapy	Community-based placements e.g. kindergarten, senior community activity centre, community centre for people living with mental illness and an academic support centre.	Mixed methods Quantitative - Pre- and post- questionnaires; using Wilcoxon and Mann-Whitney tests Qualitative - focus groups and questionnaire; using conventional content analysis Students ($n = 41$); Supervisors $n = 7$	A significant decrease was evident in students' scores from pre- to post- placement regarding setting and supervision, with a non-significant decrease regarding community. Significant increases in scores were seen regarding students' personal and professional skills. Close-to-significant differences in personal skills scores were found between role-emerging types. Overall, students and supervisors expressed positive impressions, while students addressed challenges relating to setting, supervision and expectations.	25
Kaelin and Dancza, 2019	Switzerland	To examine how occupational therapy students on role-emerging placements in school settings experienced applying threshold concepts and how it impacted on their learning.	Occupational Therapy	Five mainstream school settings working with children between the ages of 4–11 years old.	Qualitative; Semi-structured focus groups and reflective logs Students ($n = 13$); Supervisor ($n = 1$)	Students spoke of their learning of client-centredness, occupation, and understanding and applying occupational therapy theory in practice. Results suggested that learning happens within the liminal spaces which occurred from an intersection with the threshold concepts, the curriculum, knowledge generation and use, and the context and expectations of the role-emerging placement. Engaging with uncertainty may therefore be a vital part of this process.	30
Kassam et al., 2013a	Canada	To explore the viability of role-emergent long-term care facilities as advanced pharmacy practice experiences at sites which had traditionally not served as placement locations	Pharmacy	Long-term care facilities	Mixed methods; Survey Quantitative - t-tests and Mann-Whitney U tests Qualitative, using thematic analysis of free-form and open-ended questions	All five role-emergent pharmacists and 29 long-term care participating staff reported positive experiences with the preceptor-student-staff collaboration. Preceptors reported that having	6

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Table 2 (continued)

*QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
		for pharmacy students. The specific objectives of this paper are to: (1) outline the support and training necessary for new preceptors, (2) discuss pharmacy preceptors' and long-term care non-pharmacist staff experiences with the new model, (3) compare their experiences with those at the more traditional role-established LTC APPE sites, and (4) document gains in numbers of available role-emergent sites as a consequence of the study's findings.			88 pharmacists participated in the training program, 7 pharmacists ($n = 2$ role-established and $n = 5$ role-emergent) served as LTC preceptors and 29 non-pharmacy LTC staff participated in the demonstration study	students work side-by-side with facility staff promoted inter-professional collaboration. The staff viewed students' presence as a mutually beneficial experience, suggesting that it enabled better delivery of care to the residents. This study demonstrated that role-emerging placements provided more available sites, greater student placement capacity, and more trained pharmacy preceptors than could be achieved in role-established facilities.	
Kassam et al., 2013b	Canada	To evaluate the effectiveness of an advanced pharmacy practice experience delivered at "role-emergent" placement sites within long-term care facilities that are preceptored by off-site community pharmacists	Pharmacy	Long-term care facilities 7 facilities participated: five were newly recruited test sites preceptored by off-site pharmacists ("role-emerging"), and two were hospital-based "role-established" placements as a comparison group.	Mixed methods Structured open-ended feedback questions and reflective student observations, combined with faculty reviews of student documentation and long-term care staff perspectives 23 Students (role-emerging ($n = 20$); role-established ($n = 3$))	Students at role-emergent sites expressed a desire for more one-to-one time with their pharmacy preceptor, but also benefited from more inter-professional collaboration and interacted with a broader range of health professionals than students with on-site preceptors	10
Knightbridge, 2014	Australia	To understand the experiential learning that occurred on an alternative practice education placement and the impact on entry-level competency development, personal growth, and future practice for the student.	Occupational Therapy	Not reported	Quantitative content-analysis of 14 students' reflective practice journals. Students ($n = 14$)	Sixteen subcategories were combined into seven categories: <i>life's like that</i> ; <i>about me</i> ; <i>achievement</i> ; <i>occupational therapy process</i> ; <i>communication and partnerships</i> ; <i>professional practice behaviours and responsibilities</i> ; and <i>potentials of practice</i> . Changes in reflections over time suggested a developing understanding of the professional role of an occupational therapist and of newly emerging practice areas, as well as an expanded vision of career possibilities.	21
Kyte et al., 2018	United Kingdom (England)	To explore the experiences of undergraduate physiotherapy students who had undertaken a role-emerging placement	Physiotherapy	Settings included nursing homes ($n = 4$) and charities ($n = 2$).	Qualitative; semi-structured focus groups, using thematic analysis Students ($n = 6$)	Five main themes: (1) Establishing a Physiotherapy Role Independently; (2) Finding a Voice and Influencing Change; (3) Developing Professional Identity; (4) Professional Development and (5) Support. Findings highlighted the variability of student experiences in REP settings, both positive and negative. However, all appeared to result in professional and personal benefits for the students, through	18

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Table 2 (continued)

*QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
Linnane and Warren, 2017	Republic of Ireland	To generate views from both occupational therapists and occupational therapy students on the use of role-emerging placements in the Republic of Ireland.	Occupational Therapy	Not reported	Mixed methods Quantitative analysis of surveys, including qualitative analysis of open-ended questions Occupational therapists ($n = 60$); Students ($n = 45$)	promoting graduate attributes and skills that may be attractive to employers. Inconsistent views reported around role-emerging placements. They were considered an effective method for student learning, but there was apprehension around inclusion within occupational therapy programmes in the Republic of Ireland. Preference was indicated towards inclusion of role-emerging placements on a part-time basis within formal occupational therapy education. Despite concern over the use of the placement model, both groups felt that role-emerging placements can positively influence new areas of occupational therapy practice.	27
Mantzourani et al., 2016	United Kingdom (Wales)	(1) To explore what the students aimed to get out of the placement, what went well, what didn't go so well and how the experience contributed to their learning. (2) To feedforward, improve and inform new practices	Pharmacy	Not reported	Qualitative action research using student questionnaires; plus pre-post placement workshops and reflections Students ($n = 110$)	Three emerging themes: (1) Broad professional development of the student, including communication skills, personal confidence and engaging with members of the public; (2) Interacting with members of the public including positive experiences and barriers, ability to speak to a variety of people, willingness of participant, barriers to discussion and (3) Patient perspective / experience.	23
Mantzourani and Hughes, 2016	United Kingdom (Wales)	To evaluate students' perceptions on the placement's contribution to their professional development	Pharmacy	Not reported	Qualitative; Focus groups Students ($n = 12$)	High satisfaction with their REP was reported, with an emphasis on increased understanding of the role of multidisciplinary teams, patient perceptions and impact on pharmaceutical care. Although introducing a new scheme brought some challenges, they were not perceived as insurmountable.	12
Mattila and Dolhi, 2016	United States of America	To further understand the transformative experiences of Master of Occupational Therapy students who engaged in a role-emerging fieldwork.	Occupational Therapy	Emergency homeless shelter for young men	Qualitative; Interviews and Reflective journals Students ($n = 5$)	Four themes emerged: fear and anxiety of the unknown, clinical reasoning and self-reflection, personal and professional growth, and further understanding of occupational therapy. Results indicated the powerful impact of role-emerging fieldwork on student development and provided a framework for	19

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Table 2 (continued)

*QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
Sharmin et al., 2016	Canada	To investigate the benefits and challenges of role-emerging placements of student occupational therapists in HIV service organisations.	Occupational Therapy	HIV service organisations	Qualitative; content analysis of interviews Students (n = 5); Staff from HIV organisations (n = 3); Off-site preceptor (n = 1); People with HIV who worked with the student therapists (n = 2)	meeting the standards of psychosocial fieldwork experiences. Results highlighted the following benefits: 1) Reinforcing professional skills; 2) Developing competency in providing rehabilitation services for people with HIV; 3) Shining a light on the role of occupational therapy; and 4) Empowering HIV service organisations. Challenges included: 1) Starting the groundwork; and 2) Building relationships.	22
Syed and Duncan, 2019	Canada	To explore the impact of REPs on skill development, postgraduate employment, and career pathways for occupational therapists.	Occupational Therapy	Various areas of practice, including: mental health, health promotion and wellness, physical health, vocational rehab, teaching and research, palliative care	Mixed methods Descriptive analysis was used to examine trends in the quantitative data, and content analysis was used to code categories from qualitative data. Occupational therapists who had completed a role-emerging placement (n = 74)	Results indicated five skills developed in REPs which were used throughout an occupational therapist's career. REPs appeared to have no impact on choice of practice field postgraduation, career pathways, or employment status. However, a group who identified their current job titles other than occupational therapy indicated a positive experience regarding their skills, career pathways, and employment status.	18
Thew et al., 2023	United Kingdom (England)	To measure and compare MSc students' level of competence in occupational therapy practice-based skills developed within REPs to those in traditional practice placements.	Occupational Therapy	Examples of settings included: community allotments, domestic violence refuges, mainstream and specialist schools, homeless shelters, social enterprises, charity support groups, vocational settings, community libraries, GP practices etc.	Quantitative; Survey Students (n = 181)	Students can develop similar skills of competence to practise in a REP as traditional placements and may better develop leadership and time management skills. These additional skills may advantage students in developing their careers and scoping the profession.	25
Withers et al., 2022	Canada	To understand the experiences and perspectives of physiotherapy (PT) students, their clinical instructor, nurses, physicians, and patients with a role-emerging student clinical placement in an emergency department (ED) and to identify barriers and facilitators in implementing this placement model.	Physiotherapy	Emergency department	Qualitative; semi-structured interviews using thematic analysis Students (n = 6); Clinical instructor (n = 1); Nurses (n = 15); Physicians (n = 12); Patients (n = 17)	Respondents overall reported that the placement setting provided a unique learning opportunity and recommended similar placements for future. Patients and ED staff noted that involving the PT students in patient care delivery improved assessments and self-management advice. Barriers included students' inability to chart in the electronic medical record, lack of bed space, and lack of clarity about students' scope and abilities. Reported facilitators included positive perceptions of the students' supervision and a perceived positive	30

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Table 2 (continued)

*QuADS score of ≤ 13 was considered low, 14–29 medium and 30+ high quality.

Author	Country	Aim	Professional group	Placement setting	Methods	Findings	Quality appraisal (QuADS)*
Yu et al., 2018	Australia	To explore students' reflective experiences of their alternative fieldwork placement in a childcare centre, including the positive learning opportunities they were afforded, and the issues and challenges they identified.	Occupational Therapy	Childcare setting	Qualitative; semi-structured focus group Students (n = 4)	impact on patient care and the health care team. Five categories emerged from the students': (i) learning opportunities; (ii) skills developed during the placement; (iii) supports and strategies needed for positive and successful learning outcomes; (iv) challenges experienced; and (v) the unique features of the alternative fieldwork placement.	14



Fig. 1. Braun and Clarke's (2022) process of reflexive thematic analysis.

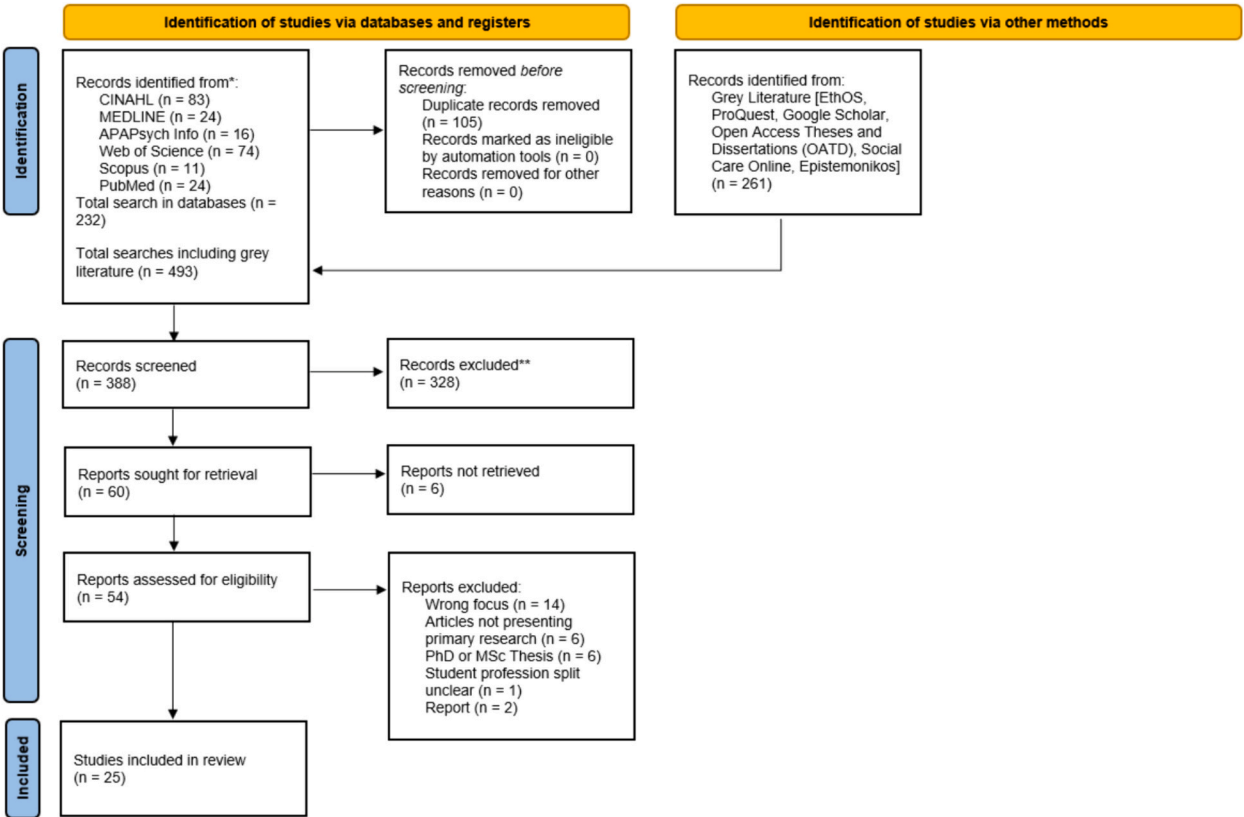


Fig. 2. PRISMA flowchart of the study selection and inclusion process.

Dolhi (2016) discussed personal and professional growth, fear of the unknown and anxiety was also cited by the occupational therapy students. Thew et al. (2023) also cited growing independence and confidence by the occupational therapy students whilst Syed and Duncan (2019) reported very highly rated autonomy. However, Clarke et al.

(2015a) cited feelings of student vulnerability, pressure, confusion and self-doubt all of which impacted on the students' sense of self-worth. The perception of leaving a legacy and having mutual benefits were highlighted by a number of the reviewed papers in this review (Clarke et al., 2014; Fanelli and Nadeau, 2022; Knightbridge, 2014; Kyte et al.,

Table 3
Placement and supervision details.

Article	Length of placement	Number of formal supervision hours	Model / other notes
Boniface et al., 2012	12 weeks	Supervision and peer meetings took place as a whole group, in pairs and individually. Weekly to fortnightly.	Peer assisted model; exchange programme with 2 UK and 2 Polish students. Pyramidal supervision structure.
Clarke et al., 2019	8 weeks full-time	Supervised daily by an on-site educator and met once a week for a minimum of an hour with an off-site occupational therapist.	<i>Presenting results from 2012 thesis*</i>
Clarke et al., 2015a	<i>*As above, presenting results from 2012 thesis</i>		
Clarke et al., 2014	<i>*As above, presenting results from 2012 thesis</i>		
Clarke et al., 2015b	<i>*Post-registration reflections, however students were from same cohort as the above Clarke et al. papers</i>		
Dancza et al., 2019	10 weeks	Long-arm supervisors met students weekly at the placement site for 1–3 h. Students generally saw the on-site supervisor weekly for a formal meeting (typically of around 1 h).	Peer-assisted model, students placed in pairs.
Dancza et al., 2013	10 weeks	Weekly off-site occupational therapy supervision sessions. <i>Hours unspecified.</i>	Peer-assisted model, students placed in pairs.
Fanelli and Nadeau, 2022	8 or 12 weeks full-time	Minimum of 8 h long-arm supervision.	Students received direct supervision from a staff member at each site who is not an occupational therapy practitioner. The staff member is responsible for pragmatics (i.e. parking, lunch, dress code), orientation, policies and procedures, and general supervision. Supervision also included a pre-fieldwork phase. Of 48 fieldwork settings, 7 placements did not have an active occupational therapist on-site. For students at sites with no occupational therapist present, a local coordinator was appointed (e.g., social worker, psychologist, counsellor) who was available for communication and consultation via email and phone calls.
Gat and Ratzon, 2014	<i>Unspecified for long-arm students</i>	The fieldwork program included weekly observations of the students' performance, weekly personal meetings with the supervisor, and group supervision meetings. <i>Hours unspecified.</i>	
Golos and Tekuzener, 2021	8–12 weeks Unclear which long-arm	Off-site supervisors met the students in their settings (twice a	Students in full-time placements were present for a five-

Table 3 (continued)

Article	Length of placement	Number of formal supervision hours	Model / other notes
	students were full-time or part-time.	week or more for full-time, and less for part-time). <i>Hours unspecified.</i>	day work week. Students who participated in part-time placement were present once a week, and spent the remainder of their week in a setting with established occupational therapy service.
Golos and Tekuzener, 2019	<i>Unspecified</i>	Supervision was provided weekly by an off-site occupational therapist, based on a consultative model. <i>Hours unspecified.</i>	During the practice placement period, students are under the supervision of certified occupational therapists who provide ongoing supervision, in coordination with university-affiliated supervisors who follow the students' personal development continuously throughout all placements. 27 out of 128 students participated in role-emerging practice placements.
Kaelin and Dancza, 2019	8 weeks where students were in the setting 1.5 days per week.	Group supervision took place with the long-arm supervisor and all students. Students also met for peer support sessions without the long-arm supervisor.	Peer-assisted learning model; students were in groups of 2 or 3 per placement site.
Kassam et al., 2013a	4 weeks	Preceptors (supervisors) scheduled in-person meetings with their students for at least one-half day per week. They were also available via phone and email to students at all times.	Manual provided to facilitate teaching and guide learning process. Students were offered an orientation day at the start of the placement. All supervisors were supported by the university through site-visits, phone communication, and written e-mail/online communications on an as-needed basis. 3-h orientation session. As above.
Kassam et al., 2013b	4 weeks	Students and preceptors met in-person at least one-half day per week where preceptors provided direct supervision and carried out formal assessments of the student's findings, care plans, and recommendations. <i>Not specified</i>	
Knightbridge, 2014	<i>Not specified</i>	<i>Not specified</i>	Approximately half of placement sites had no on-site occupational therapist; however,

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Table 3 (continued)

Article	Length of placement	Number of formal supervision hours	Model / other notes
Kyte et al., 2018	6 weeks full-time or 12 weeks part-time	One hour per week with long-arm supervisor.	long-arm supervision was provided by an experienced occupational therapy educator. The second-year placements were part-time; consisting of two and a half days over a twelve-week period. The third-year placements were six weeks full-time.
Linnane and Warren, 2017	Not specified	Not specified	Focus on perceptions around role-emerging placements, placement models not detailed.
Mantzourani et al., 2016	Not specified	Not specified	All students participated in a pre-placement workshop. On-site supervision was provided with off-site supervision by members of staff at the University, who supported students throughout their experience and during a group debrief at the end of each session. All placement educators were briefed by the academic placement lead. Further details not specified.
Mantzourani and Hughes, 2016	Not specified	Not specified	Focus on perceptions around role-emerging placements, placement models not detailed.
Mattila and Dolhi, 2016	Students spent one half day on-site for 8–10 weeks, in addition to 1 full week on-site to understand the day-to-day operations at placement site	Students met weekly with occupational therapy faculty member - daily supervision from site staff.	N/A
Sharmin et al., 2016	8 weeks	Not specified	Supervision provided by an assigned staff member on-site and an off-site occupational therapist preceptor. Further details not specified.
Syed and Duncan, 2019	Not specified	Not specified	Placement model details not specified.
Thew et al., 2023	6 weeks	The long-arm supervisor met students at the placement site once a week for formal	The long-arm supervisor maintained contact with the students via

Table 3 (continued)

Article	Length of placement	Number of formal supervision hours	Model / other notes
Withers et al., 2022	6 weeks full-time (40 h/week)	supervision and met with the on-site supervisor to ensure that the students and their project were on track with learning outcomes. Daily on-site supervision by a non-OT practitioner. 20–25 h per week supervision from an experienced physiotherapist who did not usually work in UCC.	phone/email to support them.
Yu et al., 2018	6 weeks	The number of days that students met with their occupational therapy practice educator varied from week to week, e.g. twice in one week and three times during another. Daily informal meetings took place with the team leader on-site.	N/A An occupational therapy practice educator was on-site part-time for a maximum of 10 h per week. Students returned to their university for half-day weekly tutorial groups with university academic staff, and half-day weekly self-directed learning time.

2018; Thew et al., 2023; Withers et al., 2022). This centred around interaction and placements with individuals and professions (Clarke et al., 2014; Fanelli and Nadeau, 2022). Syed and Duncan (2019) reported highly rated client centred therapeutic relationships and team consultation and collaboration. Although a lack of shared vision was also cited by Withers et al. (2022) and building relationships was a clear challenge Sharmin et al. (2016) stated.

Student expectations about the placement were discussed in a number of the reviewed papers (Clarke et al., 2019; Clarke et al., 2015b; Dancza et al., 2019; Dancza et al., 2013; Fanelli and Nadeau, 2022). The students expressed differing expectations in the reviewed papers including unique learning opportunities (Withers et al., 2022), whereas Dancza et al. (2019) reported the students having to navigate both host expectations and their own learning needs. Clarke et al. (2015a) reported how students felt emotionally challenged in the new situation/ placement area and Thew et al. (2023) reported that role-emerging placements were a positive learning experience with a high frequency of supervisor input, but that the students felt lost at the start of the experience.

4.2. Educational approaches

Supervision was viewed positively as a key element discussed in most articles, which was important in encouraging student learning, managing expectations of roles and responsibilities and facilitating navigation challenges (Boniface et al., 2012; Clarke et al., 2019; Clarke et al., 2015a; Dancza et al., 2019; Dancza et al., 2013; Gat and Ratzon, 2014; Kaelin and Dancza, 2019; Mantzourani and Hughes, 2016; Thew et al., 2023; Withers et al., 2022). Supervision was discussed in terms of flexibility and individualisation to both student and supervisor (Boniface et al., 2012), as well as highlighting the necessary experience and capacity of the indirect supervisor to give sufficient support to students, as well as the support needed themselves (Boniface et al., 2012; Dancza et al., 2013). Challenges were noted relating to availability of on-site supervision, where students found dealing with the level autonomy, a different supervision model, and lack of established processes to be exhausting and unsettling (Dancza et al., 2019).

However, this was mitigated by regular off-site supervision (Dancza et al., 2013) and was also reported to foster personal reflection and growth throughout the placement due to the increased professional independence (Boniface et al., 2012; Gat and Ratzon, 2014).

Once in placement, support was identified as paramount and was provided in various forms such as workbooks to support and guide learning, supervision sessions, and support from on-site staff (Boniface et al., 2012; Clarke et al., 2019; Clarke et al., 2015a; Dancza et al., 2019; Dancza et al., 2013; Fanelli and Nadeau, 2022; Golos and Tekuzener, 2021; Kaelin and Dancza, 2019; Kassam et al., 2013b). However, mixed views related to sense of belonging with some students reporting initial apprehension in the placement and feeling isolated (Clarke et al., 2019; Clarke et al., 2015a; Kaelin and Dancza, 2019; Mattila and Dolhi, 2016; Thew et al., 2023). Support from placement, peers and supervisors enhanced feelings of belonging for others and was important in feeling valued and part of the team (Clarke et al., 2019; Dancza et al., 2019; Dancza et al., 2013; Golos and Tekuzener, 2021; Kaelin and Dancza, 2019; Kassam et al., 2013a). Feelings of isolation occurred where students felt their on-site supervisor didn't understand what it was like to be on the placement (Clarke et al., 2015a) and peer support was equally used as a coping strategy (Clarke et al., 2019). Similarly, preparation was identified as vital to implementing long-arm supervision placements, managing expectations and understanding the role of the student (Boniface et al., 2012; Clarke et al., 2019; Golos and Tekuzener, 2019, 2021; Kaelin and Dancza, 2019; Withers et al., 2022).

The placement model was seen to offer a new structure outside of the students' usual practice, which led to students' reflection on the reliance and familiarity of the established practice and structures afforded in traditional placements (Clarke et al., 2019; Clarke et al., 2015a; Clarke et al., 2014; Dancza et al., 2019; Dancza et al., 2013; Golos and Tekuzener, 2021; Kaelin and Dancza, 2019; Kassam et al., 2013b; Knightbridge, 2014). The structure of placements varied in their approach to long-arm supervision, although not all articles reported the length of placement, number of supervision hours or structure. Where reported, placement lengths varied between 6 and 12 weeks long with some being full-time and others part-time, or as part of a mixed model of supervision in other placement areas. In general, students had daily access to an on-site supervisor who was not from their professional body, with additional supervision hours from the long-arm supervisor for at least 1 h every week or fortnight (see Table 3).

4.3. Educational outcomes

Higher levels of learning and personal growth were reported to occur through increased autonomy, responsibility and overcoming the unique challenges and opportunities associated with role-emerging and indirect supervision structure (Boniface et al., 2012; Clarke et al., 2019; Clarke et al., 2014; Dancza et al., 2013; Fanelli and Nadeau, 2022; Gat and Ratzon, 2014; Golos and Tekuzener, 2021; Mattila and Dolhi, 2016). Difficulties relating to the absence of an on-site supervisor or role model led to students feeling overwhelmed and a sense of being the most challenging placement the students had undertaken (Boniface et al., 2012; Clarke et al., 2019; Linnane and Warren, 2017; Withers et al., 2022). However, these challenges developed into reported growth, leading to a new sense of self, and greater confidence, personal skills, and understanding of their profession (Boniface et al., 2012; Clarke et al., 2019; Clarke et al., 2014; Dancza et al., 2013; Gat and Ratzon, 2014; Kassam et al., 2013b; Mantzourani et al., 2016; Mattila and Dolhi, 2016; Thew et al., 2023; Withers et al., 2022). This was reported to be useful in post-registration employment (Clarke et al., 2015b), as well as marketability for students applying for jobs (Dancza et al., 2019; Kyte et al., 2018; Syed and Duncan, 2019).

Equally, professional skills were also reported to be positively developed including working with initiative, critical thinking, communication, deeper understanding of the individual and client-centred approach, decision-making, time-management and promoting the

profession (Clarke et al., 2015b; Golos and Tekuzener, 2019, 2021; Kaelin and Dancza, 2019; Mantzourani et al., 2016; Mattila and Dolhi, 2016; Sharmin et al., 2016; Syed and Duncan, 2019; Thew et al., 2023; Withers et al., 2022). In part this related to feelings of confidence, empowerment and sense of achievement in navigating the placement successfully without an on-site supervisor and outside of familiar structure (Clarke et al., 2016; Clarke et al., 2015b; Clarke et al., 2014; Mantzourani et al., 2016; Sharmin et al., 2016; Thew et al., 2023; Withers et al., 2022). The nature of placements overall was perceived to increase students' client-centredness in their practice (Clarke et al., 2015b; Clarke et al., 2014; Syed and Duncan, 2019).

Intrinsic student motivation was an important variable, with some articles suggesting increased suitability for students who were motivated to participate in these placements and overcome their challenges, citing personal attributes including courage and confidence (Clarke et al., 2019; Clarke et al., 2015b; Dancza et al., 2019; Dancza et al., 2013; Fanelli and Nadeau, 2022; Kassam et al., 2013b; Kyte et al., 2018; Mantzourani et al., 2016; Mantzourani and Hughes, 2016; Withers et al., 2022). Navigating expectations around pace of placement, getting to know the placement site and expectations from staff on-site were reported by some articles and led to students feeling increased pressure and tiredness (Clarke et al., 2015a, 2015b; Dancza et al., 2019; Dancza et al., 2013; Sharmin et al., 2016; Withers et al., 2022). However, this was suggested to vary between placement sites, nature of work and expectation management through preparation and supervisory support (Clarke et al., 2015a; Sharmin et al., 2016; Withers et al., 2022). Notably, some articles perceived personal traits such as resilience, confidence and intrinsic motivation as being an important variable in matching the suitability of students with placements, and may impact the student's ability to engage in the requirements of autonomy and self-directed learning (Dancza et al., 2019; Lau and Ravenek, 2019; Yu et al., 2018).

The new perspectives brought by the students to organisations were reported to provide learning and enrich the placement setting(s) (Clarke et al., 2014; Fanelli and Nadeau, 2022; Golos and Tekuzener, 2019; Kassam et al., 2013a; Linnane and Warren, 2017; Sharmin et al., 2016). As reported in the theme of professional identity, this also led to positive perceptions from staff and supervisors at setting sites who perceived the students as having a lasting positive impact, as well as learning from the students themselves.

5. Discussion

By exploring the literature, this systematic review aimed to investigate two research questions: (1) what constitutes indirect supervision in health and social care settings? and (2) how is it perceived by nursing, midwifery and allied health students and those supporting them? Of the 25 articles included in this review, a mixture of approaches to indirect supervision was found to constitute placements. Equally, perceptions of indirect supervision were mixed although predominantly positive, and will be discussed further in the following sections.

5.1. What constitutes long-arm supervision

Due to the great variation discovered across articles in the literature, it is challenging to define a singular approach to what constitutes an indirect supervision model. Although flexibility and variety in implementation of models is necessary, particularly across professions and their differing needs, it is possible that what is important is to define to all stakeholders the how and why of the specific model of indirect supervision. This responds to findings that while effective learning and service contribution occurred, there were concerns around the absence of a role model from the student's profession in the placement setting and appropriate learning opportunities. A clear justification of the precise arrangements and rationale is recommended for any placement. This includes providing information on supervision hours and their

format, whilst being consistent when reporting on length of student placement and their setting including the hours they have undertaken in the arena. This type of contextual information is vital to implementing a new supervision model or amending a pre-existing model. Furthermore, future analyses would benefit from situating the reported experiences and perceptions in the context of a detailed structure of the placement model. Research shows that the use of peer-assisted learning in placements can help students, for example Carey et al. (2018) found that having peer support on placement helped nursing students navigate new surroundings and support a clinical working structure. This may provide an increased sense of support especially in long-arm supervision where settings and structures are unfamiliar. Additionally, the format and quantity of supervision may also influence student perceptions on their understanding of learning outcomes, how supported they felt to reach their learning outcomes and also how positive their experience of their placement was. These elements are even more important considering an indirect supervision model where students are in an unfamiliar working setting or structure and where a registrant of the student's profession does not usually work on-site. Perceptions around professional identity, educational approaches and educational outcomes were found to be key elements influenced in the literature and are analysed in more detail in relation to our second research question.

5.2. Professional identity

The studies presented in this review show evidence of the mixed feelings and perceptions of students within the realm of professional identity. On the one hand, some articles reported feelings of fear of the unknown and anxiety at the beginning of their placement, student vulnerability, pressure, confusion and self-doubt all of which impacted on the students' sense of self-worth. Confidence is often known to correlate with improved performance and trust in practice. Preparation and support were reported in several articles to mediate these feelings and may be a significant factor in improving students' confidence and readiness for placement. This has been supported by Irvine et al. (2023) in a group of nursing students in relation to final placements who reported higher confidence levels when placement was supported by pre-placement revision or preparation. In contrast, several articles reported feelings of personal and professional growth, confidence and autonomy, especially with support and guidance from supervisors which can be vital a positive learning experience for students in such placements. However, the degree of involvement from both indirect and on-site supervisors must be balanced so that students feel they have sufficient support whilst providing opportunities for autonomy. Some of the negative feelings such as anxiety may be linked to being in a new environment and expectations held by the students before they start the placement. These feelings may not be unique to indirect supervision placements; however, it is plausible that these feelings may be heightened due to the lack of on-site supervision from a registered professional in their field. To mitigate negative feelings, it is recommendable that expectations are clearly defined from the offset for the student, indirect supervisor and the on-site supervisor/staff. As many of the articles presented indirect supervision in role-emerging placements, several articles also reported students feeling increased pressure or responsibility to represent their profession appropriately. The articles which explored the opinions of on-site staff overall reported very positive perceptions and furthermore several papers reported that these placements were mutually beneficial. Due to students introducing new approaches to care and/or leaving resources they were able leave a lasting impact which was found to benefit placement sites. This therefore suggests that role-emerging and/or indirect supervision placements can not only benefit students and provide learning opportunities, but also can be beneficial to the placement provider. Restall et al. (2016) highlighted the need for pilot projects to increase the accessibility to integrated services which is a clear development in the changing landscape of health and social care.

5.3. Educational approaches

Although overall placements all reported support and/or supervision by on-site staff in addition to formal supervision sessions, perceptions and approaches to the placement structure, frequency of formal supervision, time spent in supervision, student hours and length of placements varied throughout the literature. This is similar to Beveridge and Pentland's (2020) mapping review of different placement models, which also reports inconsistencies in methodologies, definitions and quality of studies. However, the literature overall reports positive outcomes of indirect supervision, including encouraging future expansion of the specified profession, as well as increasing placement opportunities by expanding into more diverse settings which is also supported by Schmitz et al. (2018). This is pertinent in the context of an international shift towards integrated care where varying health and social care professions are adapting multidisciplinary approaches and enabling students to learn in environments that support both health and social care needs (Knight et al., 2021). Yet for this to be implemented systematically there needs to be clear understanding as to 1) what constitutes a long arm placement 2) clear processes for student support and quality assurance and 3) appropriate funding arrangements to adequately support this initiative. There was a variance in the educational approaches across all papers within the review despite all using similar terms to describe the placement model. This was reflected in the approach to preparation of those supporting the learners, the amount of contact from the long arm assessor and the way that the learning was to be structured. The perception of the learners and those supervising them was not overtly measured although their experience and opinions of the approach was a feature.

Some approaches were very structured with learning outcomes 'prescribed' for the students, including completion of a workbook to guide the placement activity. In other settings however, it was the value of the student and supervisor identifying the role specific input that could be given. Part-time and full-time placements were also a feature and a further variance, a structure which was discussed by Linnane and Warren (2017) as a potential preference due to part-time and full-time placements were also a feature and a further variance, a structure which was indicated by Linnane and Warren's (2017) study as a potentially preferred method of implementation.

Some of the approaches were based on a clear need to increase capacity while others drew upon the value of adding in a new professional, albeit a learner, to a setting to create learning for that student while also identifying role specific care to benefit the service they were in.

The studies were largely positive in their support of the indirect supervision placement model, despite the variances in approach to education. While a rigid placement model is not indicated, further studies to explore if there is significance in a specific educational approach that leads to improved outcomes for students. This is also important to inform the resourcing required for this placement model, which is particularly significant if this is a model that is used to increase capacity and require resourcing on a larger scale than in the studies included in this review.

5.4. Educational outcomes

Perceptions of indirect supervision in terms of learning opportunities could be divided into two main domains: professional development and personal development. The professional skills reported to have been developed were often consistent with "traditional" placement models (such as time management, clinical reasoning, decision-making), however skill development was reportedly viewed as being heightened in role-emerging placements or placements using indirect supervision. This could be related to the nature of the placements which tend to happen in settings that are new to the profession, therefore exposing students to potentially new client groups and working both with and within new teams. The increased autonomy related to the supervision model and

absence of an on-site supervisor from their profession, reportedly led to students feeling overwhelmed by the challenges associated with the placement and supervision model, which made the placement feel more challenging than other placements. However, in several papers reflections indicated increased confidence and autonomy by the end of placement, suggesting the challenges encountered within the placement can lead to higher levels of learning. Although few papers researched the longitudinal perceptions of such learning, it is promising that students felt the placements and skills learnt had given them an edge when searching for jobs post-registration.

This was further supported by Thew et al. (2018) who reported that these additional personal and professional skills developed in role-emerging placements, including the ability to establish and develop the profession in a widening variety of settings, increased employability for students following registration. There have also been challenges and apprehensions in the implementation of indirect supervision which have included concerns about the lack of profession-specific guidance at placement (Linnane and Warren, 2017) and students' need for increased support (Dancza et al., 2016; Dancza et al., 2013). Student learning styles and levels of independence may also need consideration, however further research is warranted.

One of the key reported benefits of long-arm placements was increasing student exposure to different elements of their profession, which has been found to facilitate both personal growth and development of professional identity in multiple aspects including self-confidence, interpersonal skills, increased professional autonomy, wider knowledge and greater understanding of the profession (Clarke et al., 2014; Mantzourani et al., 2016; Mantzourani and Hughes, 2016; Sharmin et al., 2016).

5.5. Limitations

The literature in this review predominantly originated from occupational therapy, with a small number of physiotherapy and pharmacy articles, which demonstrates limited representation of professions using indirect supervision in the literature. Although long-arm supervision is a novel and increasing approach in the field of nursing, none of the articles pertained to the field of nursing or midwifery and therefore the authors acknowledge that there is a lack of representation within these fields. However, there has been a sizeable shift in nursing education to using innovative supervision models to widen experiential breadth for students (Kyle et al., 2021). This includes voluntary and community settings, which as Kyle et al. (2021) qualitatively reported, nurse leaders ($n = 24$) considered beneficial to not only student and setting, but also contributes to the paradigm shift towards health and social care integration.

6. Conclusion

This systematic review has highlighted the variability within, and definitions of, placements using indirect supervision which has led to inconsistent approaches. On the one hand, this is positive as it allows flexibility and may be necessary to navigate differing requirements of professional bodies and professions themselves. However, the lack of consistency in formulated and reported structure convolutes the answer as to what constitutes indirect supervision placements. Further research is required across nursing, midwifery and other allied health professions to ensure equal professional representation and to further establish what indirect supervision placements can provide for future practice in these fields.

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Protocol registration

The protocol for this review was registered with the international prospective register of systematic reviews (PROSPERO; CRD42023418302), which can be accessed at rd.york.ac.uk/prospero/display_record.php?RecordID=418302.

CRediT authorship contribution statement

Rebecca Dew: Writing – review & editing, Writing – original draft, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Alison James:** Writing – review & editing, Validation, Methodology, Investigation, Data curation, Conceptualization. **Teresa Burdett:** Writing – review & editing, Writing – original draft, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Donna Griffin:** Writing – review & editing, Writing – original draft, Validation, Project administration, Methodology, Investigation. **Joanne Hirdle:** Investigation, Methodology, Project administration, Validation, Writing – original draft, Writing – review & editing. **Sonya Chelvanayagam:** Writing – review & editing, Validation, Project administration, Methodology. **Amanda Watson:** Writing – review & editing, Writing – original draft, Validation, Supervision, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Vanessa Heaslip:** Writing – review & editing, Writing – original draft, Validation, Supervision, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

None.

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Appendix A. Supplementary data

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