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Shona McGuinness & Suzanne Guerin

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Interprofessional supervision among allied health professionals: a systematic scoping review

Shona McGuinness and Suzanne Guerin

School of Psychology, University College Dublin, Dublin, Ireland

ABSTRACT

Clinical supervision typically occurs between clinicians who are trained in the same discipline, and this assumption is present across much of the relevant literature. However, the use of interprofessional supervision (IPS), wherein clinicians do not share the same discipline, has increased in recent years. As IPS increases in usage, it is key that the implications of this approach are explored. In order to map the existing evidence, a scoping review was conducted to explore what is known about the use of IPS across five allied health professions (psychology, speech and language therapy, occupational therapy, physiotherapy and social work). A systematic literature search of four electronic databases was conducted, with 27 articles meeting the inclusion criteria. The data were analyzed using thematic synthesis. Six key themes were identified relating to factors impacting the appropriateness of IPS, necessary steps in the IPS process, and impacts of IPS for clinicians. Limited application of standardized tools and theoretical frameworks within the existing research was highlighted. The findings identified within this review present a broad overview of the existing research relating to IPS, which can be used to inform future research in this area.

ARTICLE HISTORY

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KEYWORDS

Allied health professions; interprofessional supervision; scoping review; Supervision: thematic synthesis

Introduction

Clinical supervision is widely recognized as a major component in supporting safe practice and professional development across the health and social care workforce (Martin et al., 2014; Pollock et al., 2017). Participation in clinical supervision is recommended for all allied health professionals (Dawson et al., 2013; Snowdon et al., 2020). However, numerous definitions of clinical supervision can be found across the relevant literature. For the purpose of this study, an empirical definition developed by Milne (2007) will be used, with clinical supervision defined as "the formal provision by a senior/ qualified health practitioner of an intensive relationshipbased education and training, that is case focused, and which supports, directs and guides the work of colleagues" (2007, p. 440). It has been suggested that the provision of effective clinical supervision for allied health professionals is of critical importance, as the benefits experienced may extend beyond clinicians to both service-users and organizations as a whole (e.g., Gosselin et al., 2015; Martin et al., 2017). Potential benefits for organizations may include improvements in staff morale and teamwork, greater staff retention, and enhanced commitment to organizations among professionals (Koivu et al., 2012; Martin et al., 2021). Effective clinical supervision has also been indicated as potentially enhancing the quality of care provided to service-users (Dawson et al., 2013), as well as the process of care, particularly when focused on improving clinical technique or improving practice in a specific area (Snowdon et al., 2017).

Despite the widespread acceptance of clinical supervision as an important source of support for professionals, concerns have long been highlighted around the overall quality of research in the area of clinical supervision, with common methodological weaknesses identified including the limited use of both theoretically-informed approaches and standardized tools/measures (e.g., Alfonsson et al., 2018; Ellis et al., 1996; Milne et al., 2008; Olds & Hawkins, 2014). A 1996 review of clinical supervision research (Butterworth, 1996) highlighted the importance of developing validated tools for measuring aspects of clinical supervision, particularly in supporting the value of clinical supervision and justifying the resources used. However, while some standardized measures have been developed in the time since, recent years have seen an increased usage of unvalidated clinical supervision measurements with uncertain psychometric properties (White, 2018). Another review of research in this area published in the same year (Ellis et al., 1996) identified a lack of theoretically-informed approaches across the existing literature, concluding that the application of theory should be an important criteria for future supervision research. However, more recent reviews have identified a similar lack of theoretically-informed approaches (e.g., Alfonsson et al., 2018; Milne et al., 2008; Olds & Hawkins, 2014). According to Barker and Hunsley (2013), the lack of a theoretical basis in existing clinical supervision research has led to great difficulty in developing a cumulative, meaningful evidence base. As a result, it is difficult to surmise to what extent findings from much of the supervision research can be useful in informing the practice of supervision.



Traditionally, clinical supervision has been conducted between clinicians who are trained in the same discipline, holding common codes of ethics, values, and professional aims, and this is often assumed to be the case within the supervision literature (Davys & Beddoe, 2015). However, in recent years it has become increasingly common for supervision to be conducted across disciplines (Davys & Beddoe, 2015; Kelly & Green, 2020). Within such supervision arrangements, two or more clinicians from different disciplines meet with the goals of ensuring optimal outcomes for service-users, supporting the development of the supervisee's professional practice, and offering different perspectives to practise (Launer, 2018; Lindblad, 2021). A number of terms have been used to describe this form of supervision, including "cross-disciplinary" (e.g., O'Donoghue, 2004; Thomasgard & Collins, 2003), and "interdisciplinary" (e.g., Spence et al., 2001). For the purpose of this study, the term "interprofessional" was chosen, as this has been frequently used in the relevant literature (Davys & Beddoe, 2015).

It is widely accepted that understanding the complex processes involved in clinical supervision is important in ensuring best practice and safety for all parties involved (Beddoe, 2012; Rothwell et al., 2021). However, while the use of interprofessional supervision (IPS) may be increasing in practice, to date there has been limited research examining this form of supervision in isolation from other supervision types (Bostock, 2015; Davys & Beddoe, 2015). It also appears that no prior attempts have been made to map the existing evidence relating to IPS. This may contribute to a lack of understanding of the functions and processes of such arrangements, as well as challenges in surmising effective approaches for future research, including the applicability of existing standardized tools and theoretical approaches. With this in mind, this scoping review aims to provide an overview of the existing evidence, with the goal of identifying key factors underpinning IPS, exploring the use of standardized tools and theory within the existing research, and identifying gaps for future research.

Background

The growth in IPS has been related to several key factors. For example, recent years have seen a move toward more regulated practice environments, which has led to a greater demand for clinical supervision (Beddoe, 2010). This shift has been associated with the introduction of clinical governance, an increasing emphasis on risk management, and recognition of the need for continuing professional development and self-regulation activities throughout one's career (Butterworth, 2001; Rice et al., 2007; Walker & Clark, 1999). The combination of these elements and resulting increased demand for clinical supervision has led to shortages in existing pools of supervisors in many settings, which in turn has led some professionals to seek supervision beyond their own discipline in order to meet supervision requirements (Davys & Beddoe, 2015).

Another contributing factor, as highlighted by Davys and Beddoe (2015), may be the impact of cost-driven reforms across health and social care services, which in some cases have led to major restructurings of management systems. Changes in systems of management in such cases may directly impact the structures within which allied workforces practice (Porter & Wilton, 2019). A central element in many such reforms has been a move away from centralized professional hierarchical structures (Law & Boyce, 2003). This shift has led to the increased use of decentralized structures wherein disciplines are combined under a single structure led by a single manager (Kolehmainen-Aitken, 2004). As a result of these changes, managers across health and social care services often no longer share the disciplinary training or experience of many of their team members, but are often responsible for providing supervision for every member of their team (Davys & Beddoe, 2015; Kolehmainen-Aitken, 2004). The current review was developed in the context of one such case of reform in the disability sector within the Republic of Ireland. Developing an understanding of IPS within disability settings is thus of particular interest to the researchers, particularly as clinical supervision has been highlighted as playing a key role in issues of concern within disability settings, including staff retention and the prevention of staff burnout (e.g., Lincoln et al., 2014; Vassos & Nankervis, 2012).

The aforementioned reforms have also been associated with a shift in the idea of what constitutes best practice in health and social care. This shift has seen multiprofessional working, wherein professionals from different disciplines work alongside each other, replaced with interprofessional working, within which professionals work closely together with common goals and shared management and information systems (Banks, 2010). Interprofessional teams are indicated as sharing case management and optimizing the skills of team members, thus providing enhanced services to service-users and communities (World Health Organization, 2010). IPS has been described as a mechanism which supports the integrated nature of interprofessional working by enhancing learning between different professionals and prioritizing holistic, integrated practice (Arthur & Russell-Mayhew, 2010; Kelly & Green, 2020; Mullarkey et al., 2001).

The combination of these factors have contributed to the increased usage of IPS. However, as highlighted, to date there has been limited research exploring this form of supervision in isolation from other supervision types, and questions remain around a number of factors which may impact its effectiveness. For example, concerns have been raised within the existing literature around the impact of differing models of supervision between disciplines, potential implications of a lack of profession-specific supervision for professional identities, and the suitability of IPS models for early-career clinicians (Arthur & Russell-Mayhew, 2010; Davys & Beddoe, 2015; Launer, 2018). While a number of potential benefits have also been highlighted, for example skills acquisition, increased awareness of professional assumptions, and an enhancement in attitudes toward team-working (Davys & Beddoe, 2015; Launer, 2018), the relative lack of research in this area leaves many questions still to be answered.

The current review

This review has been developed within the context of the rollout of a national programme in the Republic of Ireland entitled "Progressing Disability Services for Children and



Young People" (PDS), which has led to a significant reconfiguration of children's disability services into multiprofessional teams across the Republic of Ireland (Buckley et al., 2021; Health Service Executive, 2020). Within the context of PDS, there is an evident possibility of IPS becoming more widespread among allied health professionals within the Irish disability sector. In an effort to address uncertainties regarding the use of IPS among allied health professionals, and to develop an understanding of how research in this area has been conducted thus far, this review aims to provide an overview of what is currently known about the subject by asking the following research questions:

- (1) What is known about the use of interprofessional supervision with allied health professionals?
- (2) What is known about the use of interprofessional supervision within disability-aligned/healthcare settings?
- (3) How prevalent is the use of theoretical frameworks in research which looks at interprofessional supervision and how are such frameworks used?
- (4) How prevalent is the use of standardized tools in research which looks at interprofessional supervision and how are such tools applied?

Methods

Design

A scoping review design was chosen due to its applicability in addressing broad research questions and providing an overview of the existing evidence on a given topic (Armstrong et al., 2011; Munn et al., 2018). The process for this scoping review was guided by the methodological framework developed by Arksey and O'Malley (2005), as well as further recommendations proposed by Levac et al. (2010). Guided by this framework, this review included the following stages: identifying the research question; identifying relevant studies; study selection; charting the data; collating, summarizing and reporting the results. This review was conducted in line with PRISMA standards (Moher et al., 2009; Tricco et al., 2018). A review protocol was registered with The Open Science Framework on 5 January 2022, prior to formal literature searching (available at osf.io/qc8sf).

Search strategy

An electronic search was carried out on February 9 2022 using the following databases: PsycINFO, MEDLINE, CINAHL and EMBASE. These databases, which cover a broad range of disciplines, were chosen because of their demonstrated effectiveness in identifying studies relevant to the topic of clinical supervision in prior reviews (e.g., Bradley & Becker, 2021; Snowdon et al., 2017). The SPIDER (Sample, Phenomenon of interest, Design, Evaluation, Research Type) framework for qualitative evidence synthesis was used in developing the search strategy (Cooke et al., 2012). The sample selected was clinicians working in disability, health, and aligned settings

Table 1. Keywords and Boolean operators.

Construct	Search Terms
Supervision Interprofessional	Supervision OR supervisor* OR supervise* OR supervising Interprofessional OR inter-professional OR interdisciplinary OR inter-disciplinary OR "cross disciplinary" OR cross- disciplinary
Allied Health	"Allied health" OR psychologist* OR "speech and language therapist*" OR "speech pathologist*" OR "occupational therapist*" OR physiotherapist* OR "physical therapist" OR "social worker*"

from the following disciplines: psychology, speech and language therapy, occupational therapy, physiotherapy and social work. These disciplines were selected as they have been named in documentation relating to PDS (e.g., Health Service Executive, 2020; Wharton, 2017 Psychological Society of Ireland, 2019).

The phenomenon of interest was participation in IPS. Based on preliminary searches, it was expected that a limited number of studies would be suitable for inclusion, thus, in order to develop an overview of the existing research relating to the topic, no limitations were placed on study design, evaluation or research type. Similarly, as it was aimed that a comprehensive overview of relevant studies would be developed, no restrictions on publication date were applied. The search included three main concepts, along with variations of these concepts: (i) supervision, (ii) interprofessional, and (iii) allied health. The keywords and boolean operators used are presented in Table 1.

Eligibility criteria

Studies that met the following criteria were eligible for inclusion:

- (1) Studies which explore participation in and/or experiences of formal interprofessional supervision
- (2) Studies applied in disability or healthcare settings or settings which could be considered aligned with disability or healthcare
- (3) English language studies
- (4) Studies published in peer-reviewed publications
- (5) Qualitative, quantitative, or mixed-methods studies
- (6) In most cases, non-empirical studies (e.g., gray literature, editorials, commentaries, reviews without identifiable methodologies etc.) were not considered eligible for inclusion, however relevant systematic, scoping or rapid reviews with identifiable methodologies were included where the other eligibility criteria was met.

The process of conducting this review led to two changes to the eligibility criteria set out in the review protocol. Firstly, while no limits were set regarding language at the point of database searching, it was decided, due to limited resources for translation, that non-English language articles would be excluded from the review. Secondly, it was originally planned that studies including students or trainees would be excluded. However, following an initial literature search and discussion



amongst the research team, the decision was made to include these studies due to the relatively large volume of potentially informative studies which may have been excluded.

Study selection

In the first stage of the review, the titles and abstracts of each identified citation were independently screened by two reviewers using Covidence online software. Citations remaining following title and abstract screening were subject to full text review, which was also completed independently by the same two reviewers based on the inclusion criteria. As recommended in Levac et al. (2010), reviewers met regularly throughout this screening process to resolve any disagreements and to discuss any uncertainties or concerns. Following full text review, the reference lists of included studies were searched to identify potentially eligible studies. This iterative process was completed until no new studies were identified.

Quality appraisal

Articles deemed eligible for inclusion in the review following the screening process were subject to quality appraisal. As studies which utilize various methodologies were identified, the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018) was chosen as an appropriate tool to guide this process. As several of the included studies utilized a predominantly quantitative design with a small qualitative element, it was decided that studies would only be appraised as "mixed methods" when explicitly stated, or when there was a clear qualitative and quantitative component with explicit information on the nature of each. Quality appraisal was completed independently by two researchers and any disagreements were resolved through discussion. The aim of this quality appraisal was to provide a means of understanding the overall quality of the identified studies.

Data extraction

Data were independently extracted from the included studies by two researchers using a data extraction tool developed for use in this review. The extraction tool was developed through an iterative process which consisted of discussion amongst the research team and the completion of pilot extractions. Any disagreements which occurred between the researchers throughout the extraction process were resolved through discussion. The data extraction tool included the following headings: general study information (title, authors, year, country, research aims), research participant information (sampling strategy, inclusion criteria, sample size, disciplines, age, gender, ethnicity), research methods (study design, data collection method, data analysis method, use of standardized tools, use of theoretical frameworks), and findings and conclusions (findings suitable for thematic synthesis, other relevant findings, gaps for further research, limitations). As IPS was not the sole focus within many of the included studies, care was taken to

ensure that data were only extracted where the research team could be confident that they related specifically to IPS.

Data synthesis

Objective data extracted from included studies (e.g., demographic information, methodologies, etc.) were collated and summarized quantitatively using tabulation and frequency analyzes. Quantitative data presented in the findings or results sections of studies were converted into qualitative form through a process of "qualitizing" (e.g., Heyvaert et al., 2016; Sandelowski, 2000). This process consisted of transforming quantitative findings into textual data by creating a narrative of the data, which could then be synthesized along with qualitative findings (Heyvaert et al., 2016). Relevant data from the findings or results sections of included studies were then synthesized using thematic synthesis (Thomas & Harden, 2008). This method was chosen due to its usefulness in synthesizing qualitative data in a rigorous and transparent way (Thomas & Harden, 2008).

In accordance with Thomas and Harden (2008), the process of thematic synthesis consisted of three stages. The first stage consisted of line-by-line coding of all relevant data presented under the heading of "results" or "findings" in the identified studies according to their meaning or content. In the second phase, codes with similar content or meanings were grouped together into "descriptive themes," which closely reflected the original findings of the included studies. The implications of descriptive themes were considered within the context of the research question and further developed into analytical themes (Thomas & Harden, 2008). Each stage of this process was completed by two researchers. The researchers regularly met to discuss and compare themes throughout this process in order to ensure the validity of the synthesis.

Results

A total of 263 titles and abstracts were screened, following removal of 168 duplicates. In total, 74 studies were selected for full-text screening. 27 studies were identified as meeting the inclusion criteria, 18 from electronic databases and nine identified through reference list searches (see Figure 1).

Quality appraisal

In line with instructions for utilizing the MMAT for quality appraisal (Hong et al., 2018), the authors rated a number of criteria for each study in the areas of study design, data collection, analysis and reporting using ratings of "yes," "no," or "can't tell." As efforts to calculate a single score for each study are discouraged with the use of the MMAT (Hong et al., 2018), the authors defined good quality studies as those which were rated as "yes" on all relevant criteria, moderate quality studies as those with a combination of "yes," "can't tell" or "no" ratings, and poor quality studies as those with a majority of "no" ratings. The ratings given to each study can be found in Table 2. The majority of studies

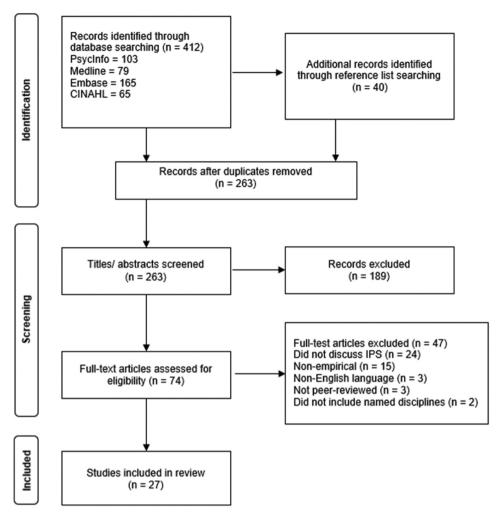


Figure 1. Prisma diagram outlining the search process.

were of a good quality (n = 13). A similar number of studies were deemed to be of a moderate quality (n = 12), however in most of these cases (n = 9) the studies were rated "yes" on all but one item. Two studies were found to be of relatively poor quality due largely to limited information reported regarding the methods used, however both of these studies (13, 15) were significantly older than the other studies included, being published in 1974 and 1972 respectively. The contrast in the quality of reporting between older studies and more recent studies is likely related to significant changes to reporting standards that have occurred in the time since the 1980s (Wharton, 2017). One commonly occurring issue which was identified across more than one quarter of the included studies (n = 8) was uncertainty around whether the sample could be considered representative of the target population. In most cases, this occurred when studies were focused on a general sample of members of a specific discipline and relied on convenience sampling through professional bodies as a sole channel for participant recruitment. This limited the samples to those engaged with specific professional bodies, which in some cases may have excluded the perspectives of certain relevant groups, i.e., students, qualified professionals not currently registered, etc.

General study information

As highlighted in Table 2, which summarizes key information on the included studies, the majority of studies identified were published between 2011 and 2020, and most studies (62.96%) utilized qualitative designs. Within 13 studies there was a specific focus on IPS. The remaining studies (n = 14;51.85%) discussed IPS more briefly. For the purpose of clarity, the numbers allocated to studies with a specific focus on IPS are presented in bold. IPS was most often referred to as "interprofessional supervision" or "inter-professional supervision" (n = 7; 25.93%). However, terminology differed significantly between studies, and 11 studies described models of supervision wherein supervisors and supervisees had different disciplinary backgrounds/training, but did not name this model of supervision (5, 6, 11, 12, 13, 14, 15, 16, 22, 23, 26). More than half of the included studies (51.85%) did not report upon the gender of participants. Of the 14 studies that did include information regarding participants' gender, nine (69.23%) included mostly female participants, while three (23.07%) included all female participants, and one included all male participants. Just over one quarter of the included studies included information about the ethnicity of participants (n = 7; 25.89%). In all of these studies, the majority of

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I and	l able 2. Summary of study information.	nay imor	rmation.											
									Gender of					
				Methodological	MMAT				participants (with n's/%,		Core	Theoretical		
#	Author(s)	Year	Country	approach (based on MMAT)	summary count	Sample size	Disciplines included (with n's/% where reported)	Setting(s)	where reported)	Ethnicity of participants (with %, where reported)	focus on IPS	frameworks used	Standardised tools used	Themes evident
-	Beddoe, L. & Howard, F.	(2012)	New Zealand	Quantitative descriptive	Yes: 4 Can't tell: 1	243	Psychologists (28.2%), social workers (71.8%)	Various settings	The majority of participants were female (80.7%)	European (68.7%), Maori (19.3%), Pacific peoples (4.1%), Asian (2.9%), other diverse ethnic	Yes	ON.	ON.	1, 2, 3, 4, 5, 6.
7	Bedford, S., Repa,	(2020)	Canada	Qualitative	Yes: 1	8	All participants were	University	All participants	groups (13.2%) Not reported	Yes	No	No	2, 5, 6
	L. & Renouf, A.				Can't tell: 4		doctoral students in clinical psychology		were female					
m	Berger, C. & Mizrahi, T.	(2001)	United States	Quantitative descriptive	Yes: 3 Can't tell: 2	651	All participants were social workers	Hospitals	Not reported	Not reported	o N	S S	o N	-
4	Bogo, M., Paterson, J., Tufford, L. &	(2011)	Canada	Qualitative	Yes: 5	77	Nurses $(n = 23)$, social workers	Centre for addictions	Male (18%, $n = 14$),	Not reported	Yes	No	No	1, 2, 3, 4, 6
	King, R.						(n = 29), occupational	and mental	female					
							therapists $(n = 5)$, recreation therapists $(n = 10)$, case workers/child and	nealth	(82%, n = 63)					
							youth workers $(n = 9)$, stress management therapists $(n = 1)$							
2	Boshoff, K., Murray, C., Worley, A. &	(2020)	Australia	Scoping review (aualitative	Yes: 5	N/A	The disciplines represented most	N/A (scoping review)	Not reported	Not reported	No No	No	No	2
	Berndt, A.			analysis)			were occupational therapy, physiotherapy,							
							pharmacy, social work and speech pathology							
9	Bronstein, L., Kovacs, P. & Vega, A.	(2007)	United States	Mixed Methods	Yes: 5	179	All participants were social workers	Various settings	The majority of participants were female (84%)	The majority of participants were white (84%)	ON.	o Z	o Z	-
7	Callicott, K. &	(2013)	z	Qualitative	Yes: 5	10	Educational	Schools	Not reported	Not reported	Yes	Yes	No	1, 3, 4, 5
	Leadbetter, J.		Kingdom (implied)				psychologists ($n = 6$), specialist early years teachers ($n = 4$)							
∞	Chipchase, L., Allen, (2012) S., Eley, D.,	(2012)	Australia	Qualitative	Yes: 5	12	Medical students ($n = 2$), physiotherapy	Orphanages and schools for	All participants were female	Not reported	Yes	No	No	1, 2, 3, 6
	McAllister, L. & Strong. J.						students $(n = 2)$, occupational therapy	children with disabilities						
	ń						students $(n=2)$,	(international						
							speecn pathology students $(n = 2)$,	clinical placement)						
							occupational							
							therapist $(n=1)$, speech pathologist							
							(n=1)							
							physiotherapists							
							(n = 2)							

(Continued)

Themes 1, 2, 3, 1, 2, 3, 5, 6 evident 2, 5, 6 1, 2, 4, 5, 4, 6 2, 4, 5 3, 5 9 Standardised tools used å ŝ ŝ õ ŝ å ŝ å õ frameworks used as a sensitizing framework developed Theoretical concept) Yes (social identity theory No – a was Yes S S ટ S 8 ટ focus on Core IPS Yes Yes Yes Yes Yes Yes S ટ S The majority of The majority of participants Maori (7.4%, n = 4), Other European (11.1%, n = 6), Maori (5.6%, n = 3), New (with %, where reported) Ethnicity of participants Zealand European and Zealand European and Pacific Peoples (1.9%, (68.5%, n = 37), other European or Pakeha (3.7%, n=2), New n = 1), and Asian (1.9%, n=1)were white Not reported Not reported Not reported Not reported New Zealand Not reported Not reported Not reported Not reported All participants were female Female (77.8%, participants were female (22.2%, n =Not reported participants Not reported (with n's/%, Not reported Not reported Gender of Not reported reported) where n = 42), (%98) male 12) Various settings Various settings Various settings Child guidance Setting(s) Reablement Reablement teams teams Hospital Hospital clinic Hospital (n = 4), care assistants Disciplines included (with Physiotherapists (n = 7), (n = 1), counselors (n = 1)Physiotherapists (n = 7), (n = 2), psychologists home trainers (n = 7)n's/% where reported) social worker (n = 1)nurses (n = 3), social clinical psychologist psychologist (n = 1)(n = 4), nutritionists Social workers (n = 2), (n = 6), supervising pharmacist (n=1), physicians (n = 7), All participants were All participants were Psychologists, social All participants were therapists (n=6), educator (n = 1), diabetes nurses auxiliary nurses Medical residents social workers social workers social workers occupational Nurses (n=2), (9 = u)(n = 2)Sample size 989 7 71 27 54 9 œ Can't tell: Can't tell: Can't tell: summary Can't tell: 4 Can't tell: 4 1 No: 1 MMAT count No: 1 Yes: 5 No: 1 Yes: 5 Yes: 5 Yes: 5 Yes: 4 Yes: 3 (based on MMAT) Methodological Mixed methods approach descriptive Quantitative Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Graham, N. & Miller, (1974) United States United States New Zealand (2016) New Zealand Country Switzerland (2019) Australia Norway Norway Canada (2018) (2018) (2013) (1972)(2009)(2020)Year Mulcahy, D. Dickie, R., Bartle, E., Hjelle, K. M., Skutle, O., Alvsvåg, H. & O'Donoghue, K. Henriksen, N.O. Frankena, S. T. Crocket, K., Cahill, F., Flanagan, P. Jackman, K. & Berendonk, C. Whalan, M. & Cooper, L., & Bonney, D. Author(s) Franklin, J., Stewart, A., & Moe, S. Hutchings, J., McGill, R., Hare, R. T. & Eliassen, M., Feller, K. & S. I. Hair, H. J. 9 Ξ 12 3 7 12 16 1 6

Table 2. (Continued).

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Functionary	#	Author(s)	Year	Country	Methodological approach (based on MMAT)	MMAT summary count	Sample size	Disciplines included (with n's/% where reported)	Setting(s)	Gender of participants (with n's/%, where reported)	Ethnicity of participants (with %, where reported)	Core focus on IPS	Theoretical frameworks used	Standardised tools used	Themes
Hamiciannell, J., 1922 Australia Aust	18	Longman, J. M., Barraclough, F. L. & Swain, L. S.	(2020)	Australia	Quantitative descriptive	Yes: 4 Can't tell:	163	Physiotherapy students (51%, n = 83), occupational therapy students (20%, n = 32), speech pathology students (29%, n = 80), speech (School and residential aged care facility	Not reported	Not reported	<u>8</u>		Yes	7
Note Record L. S. (2012) Count of Mined States Count tells Participants were substants Schools Not reported Not reported Not reported No Yes Jackboon, C. R. S. (2014) Implied States Count tell: Count tell	19	Mangiameli, J., Hamiduzzaman, M., Lim, D., Pickles, D. & Isaac, V.	(2021)	Australia	Qualitative	Yes: 5	0	n = 48) Interprofessional clinical educators, registered nurses, speech pathologists, mental health workers, occupational therapists, Aboriginal health worker and	Rural disability services	Female (<i>n</i> = 9), male (<i>n</i> = 1)	Not reported	<u>8</u>	° N	° Z	7
Obtonine, C. & (implied) (2014) United Kingdom Mixed methods Yes. 1 270 All participants were survives. Schools Not reported Not reported Yes No No Burton, S. (implied) (implied) Card tell: Exprovingsts: A cademic health A cademic health A cademic health A cademic health No No No Hong, B. A. & Wate, W. W. (2021) United States Qualitative Yes: 1 138 All participants were centres A cademic health No reported No reported No No Ward, W. W. (2021) Australia Qualitative Yes: 5 6 Occupational Lenance Corptas No reported No reported No Yes No K. & Ven, K. (A. Wate, K. (A. Water, K. (A. Wat	20	Ž			Quantitative descriptive	Yes: 3 Can't tell: 2	273	All participants were psychologists	Various settings	Not reported	Not reported	N N	ON	Yes	7
Robiner, W. N., (2021) United States Quantitative Yes: 1 138 All participants were descriptive descriptive Carlt tell: psychologists centres participants (92-9%) Non-Hispanic No No Non-Hispanic No No Non-Hispanic No No Non-Hispanic No Non-Hispanic No Non-Hispanic No Non-Hispanic No Non-Hispanic Non-Hisp	21	Osborne, C. & Burton, S.	(2014)		Mixed methods	Yes: 1 Can't tell: 4	270	All participants were Emotional Literacy Support Assistants (supervised by neverbloniets)	Schools	Not reported	Not reported	Yes	o Z	ON	2, 4, 6
Skinner, K., Robson, (2021) Australia Qualitative Yes: 5 6 Occupational Orphanage for Not reported Not reported No Yes No therapits (1 = 1), children with physiotherapists disabilities (1 = 2), podiatrist (international pathologists (n = 2), podiatrist (international pathologists (n = 2), pacement) Sweifach, J. S. (2019) United States Quantitative Yes: 4 426 All participants were Various settings Female (87%, n = 318) Carl tell: social workers male (13%, n = 318) 1	22	Robiner, W. N., Hong, B. A. & Ward, W.	(2021)	United States	Quantitative descriptive	Yes: 1 Can't tell: 4	138	All participants were psychologists	Academic health centres		White (80.6%), Non-Hispanic (92.9%)	o N	0 N	o Z	7
Sweifach, J. S. (2019) United States Quantitative Yes: 4 426 All participants were Various settings Female (87%, The majority of participants No No No descriptive Can't tell: social workers n = 308), were white (91.4%, n = 318) I male (13%, n = 318) I those who indicated their cander)	23	Skinner, K., Robson, K. & Vien, K.	(2021)		Qualitative	Yes: 5	9	Occupational therapist (n = 1), physiotherapists (n = 2), podiatrist (n = 1), and speech pathologists (n = 2)	Orphanage for children with disabilities (international clinical	Not reported	Not reported	8	Yes	ON	9
	24		(2019)	United States	Quantitative descriptive	Yes: 4 Can't tell: 1	426	All participants were social workers	Various settings	Female (87%, $n = 308$), male (13%, $n = 46$) (of those who indicated their condex)	The majority of participants were white (91.4%, $n = 318$)	0 N	°N	°Z	7

(Continued)

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Themes	5, 6	1, 3, 6	3, 4, 6
	5,5	Ę	, Ķ
Standardised tools used	° N	ON.	o Z
Theoretical frameworks used	ON O	Yes	O _N
Core focus on IPS	Yes	C	Yes
	λ,	ite	>
Ethnicity of participants (with %, where reported)	Not reported	All participants All participants were white were male	Not reported
Gender of participants (with n's/%, where reported)	Not reported	All participants were male	Male (<i>n</i> = 3), female (<i>n</i> = 26)
Setting(s)	Various settings Not reported	Hospital (psychiatry and family medicine resident programs)	Pre-schools
Disciplines included (with n's/% where reported)	Psychiatrists ($n = 9$), nurses ($n = 69$), social workers ($n = 2$), psychologists ($n = 44$), general practitioner ($n = 1$), teacher/lecturer ($n = 2$), occupational therapists ($n = 6$), counselors ($n = 13$),	Clinical psychologists (<i>n</i> = 3), academic psychologist (<i>n</i> = 1), psychologist (<i>n</i> = 1), psychiatrist (<i>n</i> = 1)	Educational psychologists $(n = 8)$; Family support key workers $(n = 7)$
Sample size	170	5	15
MMAT summary count	Yes: 5	Yes: 2 Can't tell: 3	Yes: 5
Methodological approach (based on MMAT)	Qualitative	Qualitative	Qualitative
Country	(2005) United Kingdom Qualitative	(2021) United States	(2017) United Kingdom Qualitative
Year	(2005)	(2021)	(2017)
Author(s)	Townend, M.	Voytenko, V. L., VanOrman, B. T., Jaarsma, R. D., Bishop, T. W., Mavis, B. E. & Achtves, E. D.	Wedlock, M. & Turner, M.
#	25	26	72



Table 3. Summary of disciplines engaged in IPS with one another.

Discipline	Receiving supervision from	Providing supervision to
Psychologists	Other	Occupational therapy Social work Other
Social workers	Psychology Other	Occupational therapy Physiotherapy Speech and language therapy Other
Occupational therapists	Psychology Physiotherapy Speech and language therapy Other	Physiotherapy Speech and language therapy Other
Speech and language therapists	Occupational therapy Social work Physiotherapy Other	Physiotherapy Occupational therapy Other
Physiotherapists	Social work Speech and language therapy Occupational therapy Other	Speech and language therapy Occupational therapy Other

Note. The term "other" is used to represent other disciplines that are not the focus of this review.

participants were described as white, caucasian or European. As highlighted in Table 2, various settings were represented, and 10 studies included participants from more than one setting. Only three of the studies focused specifically on disability settings (8, 19, 23), all of which included other significant contextual factors, with one (19) focused on a rural and remote disability workforce, and two (8, 23) centered around students working in international placements that were disability focused. The interplay of other contextual factors limited the extent to which factors specific to disability settings could be identified. Social workers were included in the highest number of studies (n = 14), followed by psychologists (n = 12), occupational therapists (n = 8), physiotherapists (n = 7) and speech and language therapists (n = 5). Further information relating to participant demographics and disciplines included is presented in Table 2.

Table 3 details which disciplines engaged in IPS with one another. All of the included disciplines also engaged in IPS with professional groups other than those of interest in this review. Other groups engaged with tended to differ by discipline, possibly reflecting the knowledge, skills and practice areas specific to each discipline. Notably, psychologists weren't recorded as receiving supervision from any of the other disciplines of interest, but provided supervision to a wide range of disciplines, including occupational therapists and social workers. Similarly, of the disciplines of interest, social workers only received supervision from psychologists but provided supervision to occupational therapists, physiotherapists and speech and language therapists. Of the disciplines of interest, psychology and physiotherapy are the only groups that were not engaged in supervision with one another.

The use of standardised tools within the included studies

Only two studies highlighted the use of standardized tools for data collection (18, 20), neither of which specifically focused on supervision. One of these collected data via a survey which was based on a validated measurement of placement quality in allied health, dentistry, medicine and pharmacy (McAllister et al., 2018) (18). The other utilized an adapted version of the Development of Psychotherapists Common Questionnaire, developed by the Society for Psychotherapy Research's Collaborative Research Network (20).

The use of theoretical frameworks within the included studies

The use of theoretical frameworks was identified within four studies, while the remaining studies did not explicitly discuss the use of theory in the design or conduct of the research. All of the studies that did discuss the theoretical frameworks that guided their research (11, 12, 23, 26) utilized different theories, which tended to relate closely to the studies' specific research questions. For example, in one study which focused predominantly on the development of an interprofessional education programme (23), a complexity theory framework (Barr, 2013) was used due to its applicability in developing new insights through understanding collective learning. Another study, which focused on knowledge transfer in reablement teams (11), used socio-cultural learning theory due to its usefulness in exploring learning as being constructed through interactions within a certain context. Social identity theory was used in another study to explore perceptions of interprofessional feedback, having been chosen as a useful method in looking at intergroup behaviors (12) A final study (26) briefly described using an "identity-experience-relationships" framework to explore the perspectives of psychologists supporting the training of physicians, however somewhat limited information is provided around the framework and why it was chosen.

Descriptive findings relating to supervision practices

While individual supervision models were most common, the use of group supervision was highlighted in 10 studies (2, 3, 4, 5, 7, 11, 15, 17, 18, 21). Six studies included information relating to levels of supervision training amongst supervisors (1, 9, 10, 17, 20, 27). Where information was provided, it was

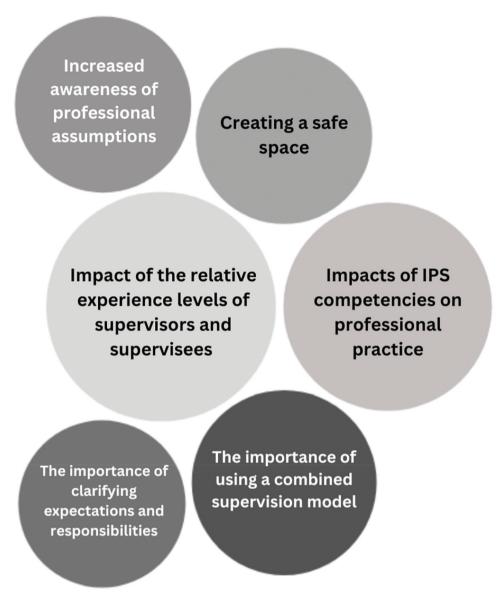


Figure 2. Visual representation of themes.

evident that formal supervision qualifications were somewhat uncommon amongst supervisors, with prevalence rates between 23% and 50% reported (1, 9, 17, 20). Several studies noted that the majority of supervision training consisted of short courses or workshops (1, 17, 27). The frequency of IPS sessions varied significantly between studies. Three studies described IPS as occurring weekly (15, 24, 26), two studies referred to IPS as occurring monthly (1, 17), while frequencies of twice per term (21), every six weeks (27), and daily (16) were all reported once.

What is known about interprofessional supervision

Thematic synthesis identified six themes: The importance of using a combined supervision model; impact of the relative experience levels of supervisors and supervisees; the importance of clarifying expectations and responsibilities; creating a safe space; challenging professional assumptions and biases; and impacts of IPS competencies on professional practice. A visual representation of the frequency of these themes is

presented in Figure 2. The size of each theme is representative of the number of papers that included elements of the theme.

The importance of using a combined supervision model

This theme captures the distinct roles of IPS and withindiscipline supervision, and the benefits of using a combined model of supervision. Six of the included studies included supervision arrangements which incorporated both IPS and within-discipline supervision (1, 3, 8, 15, 17, 26). These studies, along with several others (4, 9, 7, 25) provided a clear sense that while there are commonalities between the two forms of supervision, significant differences in purpose and scope exist between the two. Central to this distinction was the extent to which different elements of professional practice and development were supported through each supervision type. Within-discipline supervision was highlighted as supporting certain aspects of professional practice and development more effectively than IPS, including support for discipline-specific issues (1, 4), the interpretation of ethical codes (1, 9), the development of certain technical skills (9), administrative



decision making (15), and the sharing of information regarding developments and issues within one's own professional field (4). As it was thus indicated that within-discipline supervision plays an important role in supporting practice and development within one's own discipline, it was suggested that IPS should not be used in place of within-discipline supervision (1). Where there was an expectation that these aspects could be addressed solely through IPS, it was noted that a significant burden may be placed on supervisors to have sufficient knowledge and awareness of the work of supervisees (1).

However, the suggestion that IPS may not be a suitable replacement for within-discipline supervision was not viewed as undermining the potential value of IPS, rather it was indicated that due to its interprofessional nature, IPS may complement within-discipline supervision by serving different functions (1, 4, 17, 26). For example, IPS offered opportunities to address certain gaps in the knowledge or skill sets of clinicians, most often in relation to particular aspects of their roles or contexts which may be more in line with the training of other disciplines (1, 9, 26). IPS supervisors were also described as offering different perspectives to professional practice (1, 7, 25), as well as being less impacted by taken-for-granted approaches and having greater neutrality when offering advice and feedback, benefitting supervisees by challenging their existing knowledge and approaches (7, 9). Thus IPS was highlighted as having a number of potential benefits for clinicians, and it was suggested that experiences of IPS were further enhanced when discipline-specific needs were met through engagement with within-discipline supervision (17). It is thus evident that a combined model of supervision utilizing both within-discipline supervision and IPS may be beneficial. Nonetheless, several studies reported relatively large or increasing proportions of clinicians receiving IPS as their only form of supervision (1, 3, 6).

Impact of the relative experience levels of supervisors and supervisees

This theme explores the impact of the experience levels of supervisees and supervisors respectively, and the ways in which the relative experience levels of the two may impact the effectiveness of IPS. Eleven studies discussed the use of IPS among students, trainees, or those in junior positions (1, 2, 4, 5, **8**, **9**, **13**, **15**, 18, 19, 23), and it was often suggested that IPS may be challenging when supervisees are in the early career stages, particularly for students (1, 4, 9, 15, 24). Providing IPS to students was highlighted as being somewhat more complex than providing IPS to experienced professionals for a number of reasons. A key issue was the developmental and training components involved in student supervision, with concerns highlighted among supervisors around their abilities to provide the necessary discipline-specific knowledge or technical guidance, often with limited knowledge of the supervisees' discipline (8, 9, 19). Potentially related to such concerns among supervisors, supervisees at times experienced less feedback on their work when compared with within-discipline supervision, as well as a greater need to explain and justify their decision making, which was particularly challenging for students and those in the early career stages (2, 8). While

developing skills in advocating for one's own discipline was indicated as a potential benefit of IPS, students were highlighted as being less empowered to do so than qualified professionals, placing them in challenging situations (2).

Experience in one's own area of practice was thus presented as a core consideration when assessing the suitability of IPS, however this was not limited to the experience levels of supervisees, as the efficacy of IPS was also highlighted as being impacted by the experience levels and perceived expertise of supervisors (1, 4, 17, 20, 21). In much the same way as supervisees, it was suggested that in order for IPS to be most effective, supervisors should first be sure of their own practices (1). Supervisee receptiveness to and valuing of supervision was indicated as being somewhat dependent on perceptions of the competence and clinical expertise of supervisors (1, 4, 12, 13, 17). At times, this related specifically to the relative experience levels of supervisors and supervisees in shared areas of practice or those which were of particular focus in IPS (1, 12, 25). In cases where supervisors were viewed as less highly skilled in the specific area of practice than supervisees, it was indicated that IPS may not provide sufficient support (25), and that supervisee receptiveness may be negatively impacted (12).

The importance of clarifying expectations and responsibilities

This theme captures the importance of clarifying expectations for IPS and the responsibilities of each party early on in the supervision process. Five studies highlighted the importance of shared understandings and expectations between supervisors and supervisees around the functions of IPS (1, 8, 9, 10, 27). Clear explanations of the purposes and potential benefits of IPS at an organizational level were noted as maximizing learning potentials for supervisees (10), and it was described as important that supervisors demonstrated informed and realistic understandings of what IPS could achieve (8). However, varied understandings around the functions of IPS were presented both within and between studies (4, 17, 26), with the authors of one study suggesting that no unified understanding of what constitutes IPS could be identified (17). A lack of clarity around IPS was associated with misunderstandings between supervisors and supervisees, who may enter into IPS with differing expectations (7, 9). Such misunderstandings were associated with tension within the supervisory relationship (7) and were described as potentially hindering professional practice (17). In contrast, IPS was described as working best when both parties were clear about its purposes and limitations (1), and where mutual understandings were jointly negotiated (27).

Several studies indicated that explicit efforts should be made early on in the IPS process to clarify the purposes of and expectations for IPS (7, 9, 27). The process of contracting was suggested as a means through which to address this, offering an opportunity to clarify functions, roles, accountabilities and boundaries (7, 9). However, it was evident where reported that there were variations in the level of formal contracting between studies, and it was not uncommon for clinicians to report having no formal contract in place (7, 17). Nonetheless, contracting was indicated as being an important element of IPS, and it was suggested that more thoroughness

was needed in the contracting phase within IPS in comparison to within-discipline supervision due to the interprofessional nature of the relationship (9). Contracting was also positioned as a necessary step in clarifying accountabilities in IPS (9). This may be an important element in ensuring the safe and ethical practice, as it was indicated that in some cases clinicians were acting as IPS supervisors without clear agreements in place as to the extent to which they could be held accountable for the professional practice or ethical adherence of supervisees (7). In such cases, supervisors expressed uncertainty around their own responsibilities and accountabilities (7).

Creating a safe space

This theme explores the importance of providing a safe space for clinicians within IPS. Safety in this context encapsulates positive and supportive supervisory relationships, as well as trust, confidentiality and respect within the supervision process. It was suggested that supervisory relationships were of major importance within IPS (1, 13, 21). The development of positive supervisory relationships was described as having the potential to reshape negative views about IPS (13), and to enhance feelings of safety within the supervision process (7, 27). Several factors were highlighted as potentially impacting the development of positive supervisory relationships, including the availability of support between IPS sessions (11, 16, 21), the reliability of supervisors (27), and the willingness of supervisors to take on board supervisee feedback (4, 21). It was suggested that supervision was enhanced when supervisory relationships were experienced as reciprocal and where there was mutual respect between parties (1, 4, 15). Where IPS was viewed as a safe space, it was noted that greater ease was experienced in seeking emotional support (21) and in discussing sensitive matters (4). However, it was indicated that in order for supervisees to feel comfortable discussing difficult or sensitive matters, it was crucial that trust was developed (1, 4, 7, 27).

The development of trust within the supervisory relationship was described as more important in IPS than in withindiscipline supervision (4), however it was also suggested that within IPS, trust may initially be quite fragile and may take time to establish (27). This may be associated with unease in sharing professional challenges with a clinician from another discipline, which was commented upon in several studies (25, **27**). Where trust could not be fostered within the supervisory relationship, it was suggested that supervisees may withhold information from their supervisors (1, 7) which was indicated as potentially impacting the safety of their professional practice (1). For this reason, one study suggested that IPS should not proceed if there was any doubt that a relationship of trust could be developed (1). It was suggested that issues around transparency in IPS may be related to concerns related to confidentiality, with particular concerns noted regarding confidentiality from line managers (7). Where supervisees experienced safety and trust within IPS, it was suggested that greater transparency may be experienced than in within-discipline supervision, particularly in cases where supervision was typically accessed through discipline-specific management structures (1, 7, 27). As such, it was indicated that the extent to

which clinicians experienced a sense of safety within IPS had significant implications for supervisee transparency.

Increased awareness of professional assumptions

This theme considers the ways in which participating in IPS may increase clinician's awareness around preexisting professional assumptions and biases. This encapsulates the development of understanding and appreciation of other professional roles, as well as challenges to preexisting beliefs around professional hierarchies. Participating in IPS was indicated as enhancing understanding of the roles and approaches of other disciplines among clinicians across nine studies (1, 2, 7, 9, 10, 12, 13, 17, 25). This was positioned as a key benefit of IPS, as it was suggested that prior to participating in IPS clinicians may have relatively limited awareness of the roles of other disciplines, which the prospect of transitioning toward the use of IPS may bring to light (10, 13). Restricted views of other disciplines were associated with professional biases and assumptions (2, 10, 13), which were indicated as impacting willingness to embrace IPS (13), and challenges in acknowledging the potential benefits of IPS (10). Biases toward and assumptions about other disciplines were also associated with preexisting beliefs around professional hierarchies (2, 12). It was suggested that clinicians who had risen through hierarchical systems may be more comfortable within these systems (15). Concerns were noted around the willingness of supervisees who worked within hierarchical systems to embrace IPS, particularly in cases where the supervisee came from a discipline which would typically be seen as being in a higher position than that of their prospective supervisors (12). However, while this may be experienced as unusual, it was indicated that it did not necessarily impede openness to feedback once the supervision process was established (12).

Several studies highlighted ways that these types of assumptions and biases could be managed within IPS. This includes open and direct discussion around professional hierarchies and assumptions (2, 13) explicit opportunities for supervisees to provide information about their professional role and to learn about the professional roles of others (2), and opportunities to see supervisors or supervisees functioning in clinical settings (12, 13). Along with these specific strategies, the process of engaging with a supervisor or supervisee from another discipline while participating in IPS itself was indicated as having the potential to challenge professional assumptions (17), as well as enhancing appreciation for the work of other professionals (2), and increasing understandings the contribution of other disciplines in supporting service-users (1). The understandings developed through this process were suggested as having the potential to prompt clinicians to question institutional approaches and power structures (1, 9) and to support clinicians in understanding clinical practice through different perspectives (17, 25), both of which were indicated as beneficial to those involved.

Impacts of IPS competencies on professional practice

This theme explores the ways in which competencies developed in IPS may impact professional practice. This encapsulates effects on clinicians' individual practice, including enhanced skills, confidence and creativity, as well as effects on interprofessional working, including enhanced teamwork and communication skills. A key benefit of IPS across a number of studies was exposure to different perspectives and approaches (1, 4, 8, 9, 21, 25, 27). While one study noted concerns around the potential implications of IPS for professional practice due to its interprofessional nature (14), IPS was indicated as positively impacting professional practice in a number of ways. For example, it was suggested that IPS may positively impact professional practice by exposing clinicians to a greater breadth of approaches (1), providing opportunities for clinicians to broaden their knowledge and skill sets (21), exploring different theories and their application to practise (26), and supporting clinicians in understanding clinical issues more clearly and broadly (25). IPS was also indicated as encouraging clinicians to think more creatively about their work (1, 17, 25), and was described as presenting new challenges to clinicians, which was associated with enhanced competence and confidence within their professional roles (16, 27).

Increased interprofessional understandings and competencies were also noted as a benefit of IPS across seven studies (1, 2, 9, 12, 17, 23, 25). Enhanced understandings of other professional roles and approaches were associated with greater confidence in engaging in interprofessional practice within the workplace (23), and enhanced teamwork within multidisciplinary teams (1, 2, 9, 12, 17, 25). Positive effects on teamwork were also associated with enhanced communication skills developed through IPS, which most often related to skills developed in managing differences in professional language between supervisors and supervisees (1, 2, 23). It was suggested that within IPS, there is a need to learn ways in which to convey clinically relevant information using language that a supervisor or supervisee without specific disciplinary knowledge or training can understand (1, 2, 23). A key element in this learning was developing an awareness of the use of unnecessary professional "jargon" and communicating in clear, easily understandable language (2, 23). It was thus noted that IPS may provide opportunities to develop greater communication skills, which may have positive implications for both interprofessional communication (2, 23) and communication with service-users (2).

Discussion

This scoping review aimed to provide an overview of what is currently known about the use of IPS among allied health professionals, with a specific focus on knowledge which may be applicable to those working in disability, healthcare, or aligned settings. In addition to this broad aim, the researchers were interested in examining the prevalence and utilization of theoretical frameworks and standardized tools within IPS research. This review identified 27 papers that explored IPS. Given the identified lack of research that looks at this topic (Bostock, 2015; Davys & Beddoe, 2015), this appears to be a relatively high number of studies. However, it is noteworthy that IPS was identified as a core focus within 13 of these papers, while 14 papers discussed IPS more briefly in the context of broader research. The majority were published between 2011 and 2022, indicating that interest in IPS as

a topic of research appears to have increased during recent years. Only three of the identified studies focused specifically on disability settings (8, 19, 23), and other significant contextual factors were at play within all of these studies. Within two studies (8, 23), participants were students taking part in international/intercultural work placements. The other study (19) focused on the experiences of professionals working in a remote/rural setting. It is likely that the experiences and perspectives of IPS among participants in these studies were significantly impacted by these other contextual factors, and it is thus difficult to draw any conclusions around common factors specific to IPS within disability settings based on the studies identified.

The use of standardized tools was uncommon amongst the included studies. While several studies used researcherdeveloped surveys and other non-standardized measurement tools, the use of newly devised or untested tools has previously been highlighted as a limitation within existing clinical supervision research, due to concerns around the validity and reliability of such approaches (Dawson et al., 2013). In both studies which applied standardized tools, those used did not focus specifically on supervision. While a number of standardized tools have been used within the wider clinical supervision literature (e.g., Palomo et al., 2010; Winstanley, 2000), this finding indicates that thus far there is little evidence which explores how such tools apply to IPS. Theoretical frameworks were used within four of the included studies, while the remaining studies did not explicitly incorporate theoretical frameworks. This findings aligns with previous reviews that have looked at clinical supervision more generally, which have often identified limited use of theory as a common methodological issue (e.g., Barker & Hunsley, 2013; Ellis et al., 1996). As highlighted, in most cases the theoretical frameworks used in the current review appear to have been chosen due to the specific research questions or context of each research study. The small number of frameworks used suggest that IPS could potentially be examined through different lenses, for example through social or learning frameworks (11, 12, 23, 26). However, the limited use of theoretical frameworks in this area may lead to difficulty in ensuring that research designs are coherent, and that a meaningful evidence base is developed (Barker & Hunsley, 2013; Green, 2014). In the absence of a meaningful evidence base, it may be difficult for researchers, clinicians, and other stakeholders to gain a realistic understanding of how IPS works in practice, which may have negative implications for the efficacy of IPS.

The findings identified through the process of thematic synthesis indicate that IPS may enhance professional practice in a number of ways, for example by addressing gaps in knowledge, enhancing skill sets, and offering different perspectives to practise. In particular, the findings highlight the ways in which IPS may enhance interprofessional working through increasing awareness of professional assumptions and enhancing interprofessional collaboration, teamwork and communication skills. Such enhancements to practice and interprofessional working have been posited as some of the key benefits of IPS (e.g., Davys & Beddoe, 2015; Launer, 2018). These

findings align with descriptions of IPS as a mechanism which supports the integrated nature of interprofessional working (Arthur & Russell-Mayhew, 2010; Kelly & Green, 2020; Mullarkey et al., 2001), indicating that the use of IPS may lead to greater openness and ease for clinicians working in interprofessional contexts. The use of IPS may thus be beneficial within organizations should the prevalence of interprofessional working continue to increase, as it has in recent years (Banks, 2010).

However, it is also evident that a number of factors may impact the effectiveness and suitability of IPS. Firstly, the findings highlight the need to consider who is providing and receiving IPS. A key benefit of IPS highlighted was the prospect of skills development, however for this to occur it is posited that supervisors must have a relatively high level of clinical expertise. In line with findings from existing clinical supervision research (e.g., Snowdon et al., 2020), supervisees were more open to guidance from supervisors who exhibit clinical expertise. Thus IPS may be more effective when provided by supervisors with a high level of experience, or, as the findings also highlighted, when supervisors are more experienced than supervisees in the specific areas of practice of interest in the supervision process. Regarding the experience levels of supervisees, there was a clear sense that IPS was viewed as being most suitable for experienced clinicians. In line with these findings, Davys and Beddoe (2015) suggested that IPS may not be suitable for new graduates. However, while there was an evident awareness of the challenges associated with the use of IPS with this group across the studies reviewed, a large proportion of studies included students who were receiving IPS. The prevalence of IPS among new graduates was less clear.

Secondly, the findings identify a need to consider the availability of within-discipline support for clinicians receiving IPS. While the potential benefits of IPS were evident, there was a strong indication that IPS should not be considered a replacement for within-discipline supervision. Despite the identified need for within-discipline supervision, there were many instances wherein clinicians were reported as receiving IPS as their only source of supervision. When considering current views toward IPS, Davys and Beddoe (2015) suggest that the need for within-discipline supervision in parallel with IPS may be a topic for debate, however, similar to the findings of this review, a need to consider how and where clinicians access discipline specific support was highlighted. Based on the data reviewed, it is difficult to ascertain to what extent those clinicians who received IPS as their only source of supervision received adequate support for their disciplinary practice through other forms of professional support.

It was indicated that where IPS is used in isolation, challenges related to effective and safe practice may arise, including issues related to transparency. In line with previous clinical supervision research (e.g., Ellis, 2017), fostering safety and trust within the supervisory relationship was highlighted as a means of encouraging transparency and openness in IPS. The findings from this review indicated that the interprofessional nature of IPS may lead to greater challenges in developing safety and trust, and it was suggested that this may lead to the withholding of information among supervisees. The use of within-discipline supervision

alongside IPS may thus be beneficial in supporting safe practice, through providing a space wherein clinicians can discuss issues that they are unable or unwilling to share with IPS supervisors. However, as identified, there may be instances wherein within-discipline supervision is not available to supervisees. It has previously been suggested that all supervisory dyads bring individual differences to supervision based on their own experiences, worldviews, and backgrounds (Beinart, 2014). In addressing the need to foster positive supervisory relationships within IPS in cases where within-discipline supervision is unavailable, it may be beneficial to consider the different disciplinary backgrounds of those involved as one such individual difference. Methods for supporting the development of positive supervisory relationships highlighted in the more general supervision literature may thus be utilized, such as developing mutual respect, two-way feedback, and supervisor consistency (Martin et al., 2014). The regular use of measures and other resources to monitor the supervisory relationship (e.g., Palomo et al., 2010; Pearce et al., 2013), may also be useful in identifying any issues that arise.

The findings of this review also highlight the lack of a unified understanding of IPS, and associated challenges. Within several studies, differing understandings and expectations between clinicians were indicated as leading to challenges within the supervision process. In line with existing clinical supervision research (e.g., Falender & Shafranske, 2014), contracting was indicated as ensuring that shared understandings and expectations were developed between supervisory pairs. The findings of the current review suggest that in the context of IPS, this process may also serve to address disciplinary differences and clarify clinical accountabilities. Inconsistencies were evident on a larger scale across studies regarding the language used around IPS and, crucially, the functions and processes associated with IPS. The combination of these factors indicates a general lack of shared understandings of IPS across the existing literature. As previously noted, clinical supervision research has highlighted the importance of understanding the complex processes involved in clinical supervision as a means of ensuring best practice and the safety of all stakeholders, including service-users (Beddoe, 2012). As such, there is a potential that variations in understandings of IPS may have implications for service delivery. However, there was relatively limited evidence identified in this review as to what extent participating in IPS may directly impact upon work with service-users.

This review has provided an overview of some key considerations in assessing the suitability of IPS, factors impacting IPS processes, and potential implications for interprofessional working. However, further research is needed to inform supervision processes at a practice level. Future research which looks at the structure and content of IPS sessions may be beneficial in providing clear and practical guidance for clinicians and organizations. Standardized tools may be beneficial in evaluating IPS processes for this purpose, however in order to ensure the validity and reliability of standardized tools in this area, research to validate the use of novel or existing clinical supervision tools may be



necessary. The use of theory-driven approaches may also be beneficial in supporting greater coherence and transparency in future research. Further research is also necessary in order to provide comprehensive understandings of IPS and to clarify the functions and purpose of IPS. Crucially, there is a need for research which measures IPS outcomes, particularly impacts for service-user care. As clinical supervision has been noted as directly impacting the effectiveness of care (Snowdon et al., 2017), it is critical that, as the usage of IPS gains popularity the potential impacts for service-users are investigated.

Strengths and limitations

Several limitations of the current review must be noted. Care was taken to ensure that prevalent terms for IPS were included in the search strategy, however both database searching and reference list searching identified a number of studies which did not refer to IPS under any specific terminology. Due to these variations, it is possible that some relevant articles were not identified. The exclusion of non-English language may also have limited the findings. As IPS was not always explicitly referred to, and many studies included IPS as a relatively small element, the reviewers experienced difficulties at times in identifying where results directly related to IPS. In an effort to ensure that extracted data related directly to IPS, extraction was completed by two reviewers independently, and differences were discussed at length before a consensus was reached. However, in instances where the reviewers remained uncertain as to whether findings were directly relevant to IPS, the findings were excluded. It is possible that some relevant data was excluded due to this issue. Despite these limitations, the authors are confident that a rigorous and credible approach was applied in conducting this research. This review was guided by a rigorous framework (Arksey & O'Malley, 2005; Levac et al., 2010), and conducted in line with PRISMA standards in order to optimize the quality of reporting. Validity checks were completed throughout the process of the review, and the researchers' commitment to transparency is evident in the preparation of a review protocol.

Implications for practice

The findings of this review highlight a number of potential benefits of IPS for both individual clinicians and multidisciplinary teams, including the development of new knowledge and skills and enhanced teamwork and appreciation for the work of others. However, the findings also suggest IPS may be most beneficial when certain considerations are taken into account, and when specific steps are taken to support the safety and efficacy of the IPS process. It is recommended that individuals and organizations considering utilizing IPS first consider the suitability of this approach on a case-bycase basis. Specifically, there is a need to consider the experience levels of those involved, as based on these findings, IPS may be challenging for those with limited experience and may be unsuitable in addressing developmental or training needs, particularly when used in isolation. There is also a general need to consider the level of discipline-specific support needed by supervisees, and the availability of within-discipline supervision and/or supports, as these findings indicate that IPS may not be suitable in supporting certain discipline-specific needs. In order to ensure that IPS is safe and effective, it is recommended that contracting occurs early on in the supervision process to ensure that all individuals involved share an understanding of the goals and limitations of IPS, as well as their own responsibilities in the IPS process. Fostering positive supervisory relationships is also of particular concern within IPS, as these findings suggest that difficulty may be experienced in the development of safety and trust within supervision between members of different disciplines. Those involved in IPS may need to ensure the development of supervisory relationships is handled with care and, if necessary, monitored through the use of existing measures.

Conclusion

This review highlighted the complex nature of IPS. The key themes identified a number of elements which may be relevant for the practice of IPS, including considerations which need to be taken into account when considering the suitability of IPS, steps which must be taken to ensure that IPS is safe and effective, and potential impacts on interprofessional competencies and approaches. The findings of this review have also highlighted a number of limitations in the current body of research relating to IPS, including variations in terminology, limited use of standardized tools and theoretical frameworks, and a lack of research which focuses specifically on IPS. This review has presented a broad overview of what is currently known about the use of IPS among allied health professionals. The findings from this review may be beneficial in informing future research, which is necessary in order to fully understand the ways in which IPS may impact upon clinicians, organizations and service-

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Notes on contributors

Shona McGuinness holds a BSc in Psychology and an MPsychSc in Psychological Science. She is currently a PhD candidate within the School of Psychology at University College Dublin, Ireland. Her PhD research focuses on the use of interprofessional supervision and support within the Irish disability sector. She holds an Irish Research Council Postgraduate Scholarship.

Suzanne Guerin is Professor of Research Design and Analysis and Head of School at the School of Psychology at University College Dublin, Ireland. She also holds the position of Deputy Director of the UCD Centre for Disability Studies and advises on research with organisations including St Michael's House Disability Services and LauraLynn Ireland's Children's Hospice.



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Appendix

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/ objectives lend themselves to a scoping review approach.	2–7
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	7
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	7–8
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	9
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	8
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	8
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	9–10
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	10–11
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	11
Critical appraisal of individual sources of evidence	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	10
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	11–12
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	12
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	13–15
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	12–13
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	13–16
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	16–25
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	25–30
Limitations	20	Discuss the limitations of the scoping review process.	30-31
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	32
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	33