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CRITICAL REVIEW OF LITERATURE

Practice development and allied health – a review of the literature

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Abstract

Background: Practice development is defined as a facilitated process that aims to promote person-centred and evidence-based healthcare. Practice development seeks to engage individuals at all levels of an organisation in order to create positive change. It embraces approaches that are inclusive, participatory and collaborative, but there has been a reported lack of multidisciplinary involvement in its application in practice.

Aim: While practice development has been widely adopted by nurses and midwives in New South Wales, Australia, there has been limited application of this approach by allied health professionals (AHPs). This literature review aims to identify published research about the application of practice development methods by AHPs across healthcare settings.

Methods: A database review was undertaken using the SCOPUS, CINAHL and Medline databases. The *International Practice Development Journal* was also searched. A total of 1,672 articles were identified. These were scanned and 413 articles were retrieved, with 55 shortlisted for in-depth review.

Results: After application of inclusion and exclusion criteria, 15 journal articles were included in the literature review. Review of the studies identified four areas of primary focus: enhanced multidisciplinary teamwork; practice development frameworks and principles; practice development education and learning programmes; and clinical quality improvement and service delivery outcomes.

Conclusions: As the findings showed that there is a limited number of robust research studies on practice development involving AHPs, there are opportunities for the participation of AHPs in practice development and for the study of this involvement.

Implications for practice development:

- There is an opportunity for AHPs to become more involved with practice development
- Strategies to foster interest and grow understanding of the principles and methods of practice development for allied health are required

Keywords: Practice development, allied health, multidisciplinary, healthcare, literature review

Introduction

Healthcare is conducted within a context of constant change, reform, modernisation and transformation (Chin, 2009; McCormack et al., 2013). However, implementing change strategies within the healthcare system in order to improve the quality of patient care is considered complex, messy and daunting (Chin, 2003; Rycroft-Malone, 2004). Practice development has been promoted as a method for optimising the processes of healthcare service improvement by using an emancipatory change approach to the provision of person-centred, evidence-based healthcare (Dewing, 2008; Manley et al., 2008a).

Practice development is described as a mechanism for reflection about everyday practice, enabling those who deliver care to make changes to facilitate better clinical outcomes and improve the quality and safety of care (Chin and Hamer, 2006). One of the primary goals of practice development is 'to shift the focus of activity to the client' (Chin, 2003, p 425). As a result, person-centred cultures and workbased learning are also key elements of practice development (Manley et al., 2009; Yalden and McCormack, 2010). In this context, person-centredness is defined as 'an approach to practice established through the formation and fostering of healthful relationships between all care providers, service users and others significant to them in their lives' (McCormack and McCance, 2017b, p 3).

What is practice development?

The internationally agreed definition of practice development is:

> *'A continuous process of developing person-centred cultures. It is enabled by facilitators who authentically engage with individuals and teams to blend personal qualities and creative imagination with practice skills and practice wisdom. The learning that occurs brings about transformations of individuals and team practices. This is sustained by embedding both processes and outcomes in corporate strategy* (Manley et al., 2008a, p 9; Manley et al., 2011a, p 2; McCormack et al, 2013, p 8).

Practice development has been used in numerous ways to enhance clinical services, such as to increase quality and safety in healthcare within a unit, to develop shared values and service priorities and to improve communication within a healthcare team (McCormack, 2010 ; McCormack et al., 2013).

There are nine core principles that describe the practical, theoretical, and philosophical factors that underpin practice development (Manley et al., 2008a). These principles are summarised in Table 1.

Table 1: Summary of the practice development principles (Manley et al., 2008a; McCormack et al., 2013)

Principle 1	Endeavours to facilitate evidence-based, person-centred healthcare delivery that results in human flourishing and an effective workplace culture across settings
Principle 2	Has a focus on the microsystem where care is delivered as the change agent but with support from mezzo and macro levels
Principle 3	Incorporates workbased learning approaches and active learning in the workplace
Principle 4	Integrates the use of both evidence in and evidence from practice
Principle 5	Integrates the blending of creativity with cognition to promote new thinking and to promote human flourishing
Principle 6	Comprises a methodology that is complex and can be applied across boundaries and with all stakeholders
Principle 7	Is enabled by a set of methods and processes contextualised to the work environment
Principle 8	Makes use of processes such as skilled facilitation implemented close to where care is provided
Principle 9	Employs inclusive, participatory and collaborative approaches to evaluation

Practice development has traditionally been classified as technical or emancipatory. Technical practice development is defined as a 'top-down', management-driven approach that focuses on the use of participant's knowledge, technical skills and outcomes in improving care quality (Manley and McCormack, 2003). Learning occurs essentially through competency-oriented training (Tolson et al., 2009). Emancipatory practice development is defined as a 'bottom-up', clinician-driven approach that focuses on processes of reflection (Manley and McCormack, 2003). This version of practice development concentrates on collective culture and context, as well as participants' deductive and inductive knowledge, as improvement strategies (Tolson et al., 2009).

The practice development continuum was further extended to include a third set of methods and principles, those of transformational practice development (McCormack and Titchen, 2006). This approach has an inherent focus on human flourishing, where a person's potential for growth and development is realised (Titchen and McCormack, 2010). It is said to emphasise person-centred healthcare cultures where people, not tasks and services, are the focal point (Shaw, 2013).

Historical context of practice development

Practice development is an evolving approach to the delivery of healthcare (McCormack et al., 2013). It has its historical roots within the field of nursing, originating in nursing and midwifery practitioners' efforts to enhance patient care in various clinical settings. It has been described 'as a movement in the development of nursing practice' (McCormack et al., 2013, p 3).

The establishment of nursing as a distinct discipline is said to have occurred in the 1960s (Pryor and Forbes, 2007; Osborne, 2009). In the 1980s, the increased professionalism and therapeutics of nursing were reported to lead to the establishment of nursing development units. These units aimed to support nurses professionally and personally and have played an important part in establishing nursing care standards and systems for quality improvement (Pryor and Forbes, 2007; Osborne, 2009). Nursing development units evolved into practice development units, in which the focus shifted to better outcomes for patients through development of the multidisciplinary team (Osborne, 2009).

Practice development approaches became more widespread in the 1990s and evolved through the application of different approaches by nursing to enhancing patient care in various settings (McCormack et al., 2013). 'Practice development' as a term was reportedly initially used by UK nurses, but with little consistency in meaning or methodology (McCormack et al., 2013). Practice development was said to differ from other methods of quality improvement at the time due to its focus on culture, values and context of care as well as an emphasis on emancipatory change (McCormack et al., 2013). Practice development aimed to facilitate practitioners to answer questions about their practice that they generated and owned (McCormack, 2010; McCormack et al., 2013).

Practice development has continued to develop and spread internationally, becoming, it is argued, 'an increasingly accepted global movement' within the healthcare arena (McCormack, 2010, p 189).

Theoretical underpinnings of practice development

Many in the practice development field view Fay's (1987) book on critical social science as providing the theoretical underpinnings of emancipatory practice development (Unsworth, 2000; Garbett and McCormack, 2002; Boomer and McCormack, 2010; Parlour and McCormack, 2012; Shaw, 2013).

The critical social theory approach within nursing is in turn said to have its foundations in 1972 with Habermas, who contended that there were three areas of knowledge arising from different needs – technical, practical and emancipatory (Fleming and Moloney, 1996). Habermas' theory of knowledge and human interest is reflected in the seminal work by Fay, who proposed that the intention of critical social science would only be achieved through a combination of enlightenment and empowerment leading to emancipation (Fay, 1987; Titchen and McCormack, 2008).

According to Shaw (2013) practice development aligns with the focus of critical theory as it enables the clinician to 'see the world critically' (p 68) so as to better understand self, the situation and the world in order to make change. It is contended that critical social theory is appropriate to practice development because its activities promote critical action-based learning and thinking. Furthermore, critical social science theory is reflected in the methods, tools and approaches used in practice development; these include reflective practice, action learning, values clarification, critical inquiry and challenge with support (Boomer and McCormack, 2010; Shaw, 2013).

Application of practice development

In Australia and internationally, numerous nursing-related articles have been published pertaining to the application, implementation and evaluation of practice development initiatives across the nursing and midwifery field (for example, FitzGerald and Solman, 2003; Barnes et al., 2010; Beckett et al., 2013; Aitken and von Treuer, 2014). In addition, through funding support from the Nursing and Midwifery Office at the New South Wales Ministry of Health, practice development has been widely adopted by nurses and midwives across the state. This has been principally through statewide initiatives such as the NSW Health Essentials of Care programme. In this way, practice development, with its focus on person-centred approaches, has been spread and sustained throughout nursing and midwifery in the state's public healthcare services (Manley et al., 2011; NSW Nursing and Midwifery Office, 2015).

One of the primary aims of practice development is to engage individuals at all levels of a healthcare organisation to create a culture in which they are heard and feel they can make a difference (Lamont et al., 2009). Using inclusive, participatory and collaborative approaches (Hardy et al., 2011), practice development aims to engage the whole team to enhance person-centred healthcare (Manley et al., 2011b). Despite this explicit philosophy and methodology, there is evidence of difficulty in achieving the multidisciplinary engagement of clinical professionals other than nurses and midwives in practice development approaches (Manley et al., 2008b). There is also a broader need to expand practice development to encompass multiple agendas across healthcare (Manley et al., 2011a).

Aims and objectives

Allied health professionals (AHPs) are professionals educated to tertiary level who work as members of the healthcare team to optimise clinical outcomes for patients (Mueller and Neads, 2005; Pickstone et al., 2008). They have a range of technical skills, competencies and specialist knowledge in the identification, assessment, diagnosis, treatment and prevention of diseases, disabilities and disorders. They provide services including counselling, rehabilitation, nutrition, disease prevention and management, mental and physical health promotion, early intervention and health management (Boyce, 2001; Wagner et al., 2008; Grimmer-Somers et al., 2009; Wylie and Gallagher 2009; HETI, n.d.). Allied health services are provided in a variety of settings across the healthcare spectrum (Boyce, 2001; HETI, n.d.).

In the New South Wales public health sector, there are 23 identified allied health disciplines (NSW Health, 2016). These are listed in Table 2.

Table 2: Allied health professions in New South Wales

• Audiology • Art therapy • Counselling • Diagnostic radiography/medical imaging • Dietetics and nutrition • Diversional therapy • Exercise physiology	• Genetic counselling • Music therapy • Nuclear medicine • Occupational therapy • Orthoptics • Orthotics • Pharmacy • Physiotherapy	• Play/child life therapy • Podiatry • Psychology • Radiation therapy • Sexual assault services • Social work • Speech pathology • Welfare

(Wagner et al., 2009; NSW Health, 2017; HETI, n.d.)

It is noted, however, that while these professions are included as allied health professions in New South Wales, the definitions of allied health vary across countries (Pickstone et al., 2008).

The authors of this article perceived that AHPs within the NSW public healthcare system had a limited understanding of the concepts of practice development, although this had not been supported in the literature. The views of the state's allied health leaders were therefore obtained opportunistically in October 2012 via a short voluntary survey at a statewide NSW Health Allied Health Leadership Forum attended by 33 senior AHPs. Before completing the survey, they were asked whether they had previously heard of practice development; four indicated that they had.

It is acknowledged that seeking the views of allied health leaders through a workplace forum was structured as a quality initiative and so should be considered as a group reflection rather than research. However, it was felt that the forum presented an opportunity to begin the conversation about practice development with AHPs and could assist with broadly scoping the level of understanding of it.

Participants were initially given information about the approach, including its aims. They were provided with a sheet of paper and invited to respond to the question 'What is practice development?'. They were advised that participation was voluntary, that all responses would be anonymous and that the results would be collated as a baseline for future reference.

A total of 28 responses from attendees (94%) were received; 26 responses were written by individual participants, and two by groups comprising two or three members. Two attendees chose not to participate. The results broadly inferred a limited understanding of practice development among senior AHPs in New South Wales, with only two participants providing a comprehensive definition that encapsulated the key elements of practice development. It was noted, however, that practice development's focus on learning and development of practice skills was intuitively understood by many. Many of the core elements of practice development were described in the 28 responses, albeit in varying degrees, indicating some familiarity with the concepts and principles. This led to an interest in exploring this notion more formally through a literature review.

Some researchers have also suggested that the transferability of practice development methodology should be explored with interprofessional teams and with other clinical disciplines, such as medicine and allied health (Travaglia et al., 2011). Others argue the need for a more widespread adoption of practice development beyond nursing, noting it is perceived as a nursing construct by other healthcare professionals (Manley et al., 2008b). The lack of multidisciplinary approaches in the practice development literature has also previously been highlighted (Manley et al., 2008b).

Although practice development approaches have reportedly led to successful clinical and team outcomes among nurses and midwives (for example, see McCormack et al., 2009; 2011; Boomer and McCormack, 2010), the literature does not appear to reflect similar outcomes for AHPs. Although some evidence is beginning to emerge of practice development being applied by other clinical disciplines such as medicine (Akhtar et al., 2016), in the light of these findings a literature review was undertaken with the aim of identifying published information about the use of practice development approaches with AHPs in healthcare settings.

Methods

Search strategy, data source and screening

The search strategy involved a review of the SCOPUS, CINAHL and Medline databases. Searches were undertaken between December 2014 and February 2015. Keywords and alternatives were: 'allied health'/ 'health prof*'; 'practice development'; 'multidisciplinary' / 'team'; and 'healthcare'/ 'health' / 'service delivery'. These were selected so that any papers that referenced 'allied health' as a broad term would be identified along with those that referenced each of the specific allied heath disciplines on their own.

Each keyword was independently searched and then 'and' was used to link each search term. The search period was limited to 1990 to 2015. A search by key author was also undertaken, including McCormack, Manley, Titchen and Dewing. While a number of key authors are recognised as practice development experts in the field, these four authors were chosen due the breadth of their publications in relation to practice development.

A separate manual search using the terms 'allied health' and 'health prof*' was undertaken of the *International Practice Development Journal* (*IPDJ*), due to its status as the principle journal in the field. Since it is the most probable place for practice development publications, a targeted allied health discipline-specific search was undertaken in addition to the more general allied health search.

While it is acknowledged that there is a high number of professional groups that might fall under the term allied health, searches using the primary individual allied health professional groups as defined in New South Wales (Table 2) were undertaken with the *IPDJ*. Noting that robust Australian data are not available for the non-registered allied health professions, such as speech pathology and social work, it was estimated that these professional groups represented approximately 80 per cent of the state's public health allied health workforce based on local figures within a metropolitan public healthcare organisation as well as published workforce data (Australian Health Workforce Advisory Committee, 2006; SESLHD, 2017). The numbers of identified references are presented in Table 3.

Table 3: Numbers of identified references

SEARCH TERM	SCOPUS	CINAHL	MEDLINE	*IPDJ*	TOTAL
"practice development"	1,029 (English only, excluding engineering and computer science articles)	962	638	N/A*	2,629
and					
Health prof* OR "allied health"	696 (English only)	480	414	82	1,672
Multidisciplinary or team	72	136			
Healthcare OR health OR "service delivery"		66			
Search by profession					
Physio*				4	
Occupational				1	
Diet/Dietitian/ Dietician				0	
Speech				1	
Pod*/Podiatry				0	
Pharm*/ Pharmacy				1	
Psych*/ Psychology				2	
Psychologist				2	
Radio*/ radiography				0	
Social Worker				28	

* N/A applies to all green shaded areas

References were initially screened by title by the first author (PB). Where further clarity was required, the abstract of the article was reviewed. All abstracts with the term 'practice development' in the title were appraised. The author, professional context, and year of publication were also considered in the initial selection process. To enable later analysis and identification of duplicated articles, references were downloaded in the EndnoteX7™ reference management software package (endnote.com).

All the articles identified by the *IPDJ* search by individual professions (n=39) were already included in the papers generated by the wider search of allied health so were excluded from the final count. Of the remainder, 43 duplicates were identified, meaning a total of 81 duplicates were removed.

Inclusion and exclusion criteria
Papers were included in the review if they: listed AHPs as core study participants, including individual disciplines as well as those involved as part of a multidisciplinary team study; described methods, processes or theories associated with technical, emancipatory or transformational practice development; contained clear references to healthcare or clinical service delivery; were published in English; were freely retrievable; and were published in a peer-review journal. The latter criterion was revised because a key journal – *Practice Development in Health Care*, a discontinued but relevant journal, is not peer-reviewed. Papers were excluded from the review if: they did not reference AHPs or allied health participants in a multidisciplinary team as core study participants; did not reference technical, emancipatory or transformational practice development; or did not pertain to clinical or healthcare services. Articles not published in English or not able to be freely retrieved were also excluded.

Results

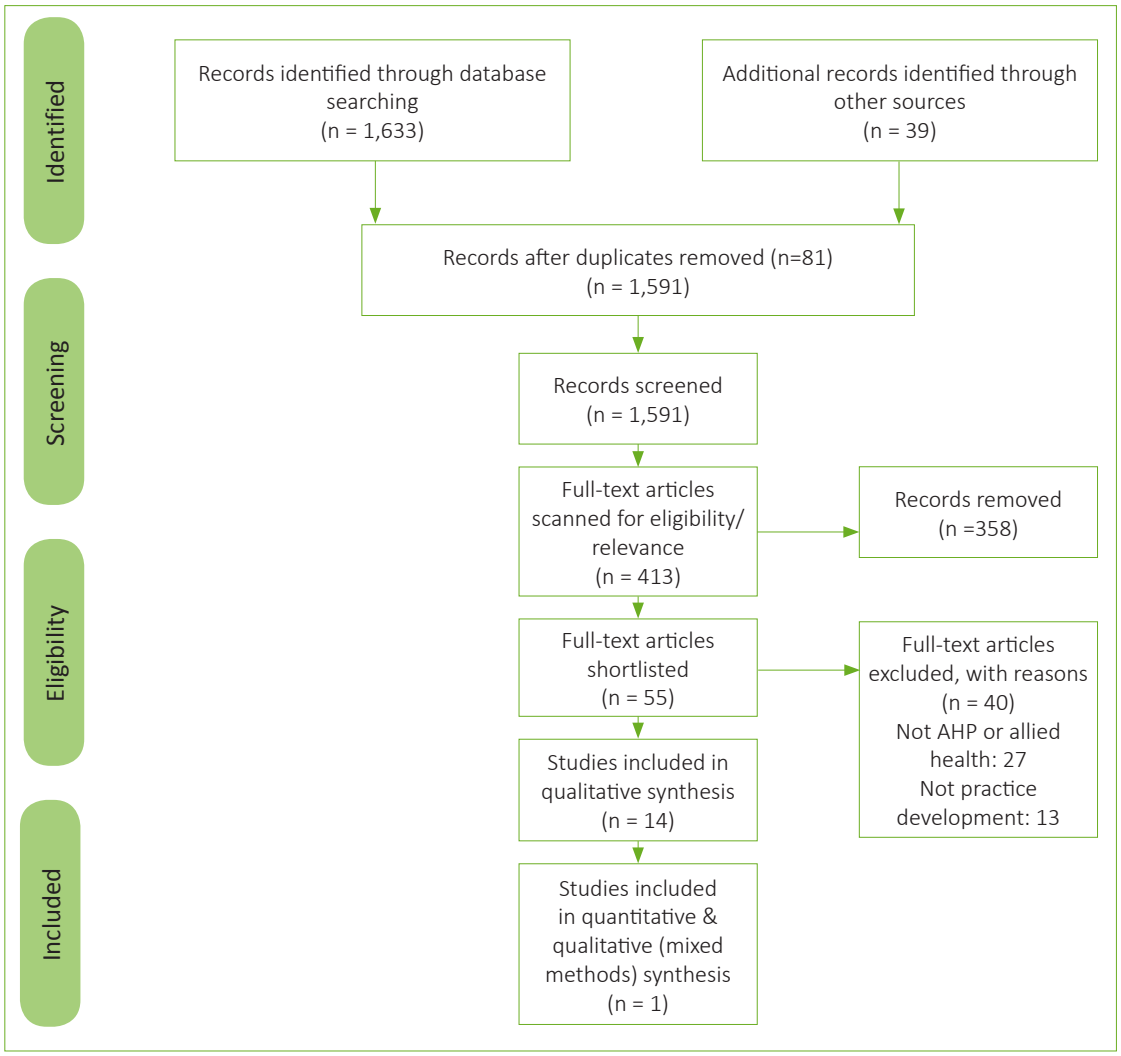
Search results

A total of 1,672 citations were scanned over 14 database searches and 15 searches of the *IPDJ* (81 duplicates were identified and removed). A total of 413 papers were obtained as full text. These were scanned for eligibility and relevance, leaving 55 papers. After application of the inclusion criteria, 15 journal papers were selected for in-depth analysis as part of the literature review, based on their perceived relevance, applicability and usefulness (Grimmer-Somers and Kumar, 2009). The total selected articles are listed in Table 4. The search process and results are summarised in the PRIMSA flowchart in Figure 1 (Moher et. al, 2009).

Table 4: Total selected articles

	SCOPUS	CINAHL	MEDLINE	*IPDJ*	TOTAL
Total selected for full article review (some duplicates)	72	160	99	82	413
Shortlisted articles	34	47	6	11	55 (98 minus 43 duplicates)
Number selected	5	37	1	2	15

Figure 1: PRISMA Summary of search results (adapted from Moher et al., 2009)



Of the articles excluded, the majority did not sufficiently relate to allied health services, or AHPs were not specifically listed as core study participants. In total, 27 papers were excluded on this basis. Six *IPDJ* articles involving allied health were excluded as they did not explicitly reference practice development.

In the field of medicine, the term practice development can be used to describe the implementation of new systems of work or services aimed at improving the business of general practice (Unsworth, 2000). This differs from technical, emancipatory or transformational practice development as defined by Manley and colleagues (Manley et al., 2008a). In total, seven articles were excluded based on the definitional differences.

Selected studies

A total of 15 journal papers met the selection criteria. In considering the highest level of primary evidence, all studies but one were qualitative. One study used a mixed-methods approach (quantitative and qualitative). There were no quantitative studies or systematic reviews of the literature. Two articles were reflective papers. All of the articles were descriptive studies. It is noted that three of the 15 selected journal articles (20%) came from journals that are not peer reviewed.

The earliest article was published in 1998 and the most recent in 2014. While there was a spread of publications across that timespan, 73% (n=11) were published between 2011 and 2014. The practice settings for the selected studies included mental health care (n=5), older persons' care (n=1), palliative care (n=1), acute care (n=4), rehabilitation (n=1), and reablement (n=1). Two studies involved multiple sites. The settings are listed in Table 5.

Table 5: Practice setting of selected studies	
Mental health services	Andvig and Biong, 2014
	Chambers et al., 2013
	Kemp et al., 2011 (multiple sites)
	Lamont et al., 2009
	Sin et al., 2003
Older persons' care services	Elliot and Adams, 2012
Palliative care service	Cambron and Cain, 2004
Acute care services	Andersen, 2012
	Bates, 2000 (orthopaedics)
	Devenny and Duffy, 2014
	Walsh and Walsh, 1998 (surgical)
Rehabilitation service	Covill and Hope, 2012
Reablement unit	Hunnisett, 2011
Multiple settings	Bray et al., 2009
	Shaw, 2012

Conceptual frameworks in the literature

The conceptual framework in the selected articles reflected the origins of practice development in critical social science with a focus on enlightenment, empowerment and emancipation (Boomer and McCormack, 2010; Freeman and Vasconcelos, 2010). With the exception of Shaw (2012), this was not made explicit in the articles but it can be inferred by their content. Drivers for change described in the articles included the improvement of clinical service provision, the requirement to meet external accreditation standards and a need to manage change better within the complex healthcare system.

Tools for critical appraisal

Critical appraisal is a process that identifies the strengths and weaknesses of a research article so the validity and usefulness of research findings can be assessed (Young and Solomon, 2009). There is a range of tools available for clinicians who are seeking to ascertain the rigour and appropriateness of research papers (Smith, 2009).

Rigour for this review was ascertained in two ways. Papers were assessed using the Clinical Appraisals Skills Programme (CASP) worksheet '10 questions to help you make sense of qualitative research' (CASP, 2010) and then supplemented by Young and Solomon's (2009) 10-step guide to critical appraisal.

Thematic findings

As part of analysis and synthesis of the literature, the themes and key concepts arising from the literature need to be identified (Cooper 1988, cited in Randolph, 2009; Boote and Beile, 2005). There were four major practice development themes across the studies reviewed:

- Enhanced multidisciplinary teamwork
- Practice development framework and principles
- Practice development education and learning programmes
- Clinical quality improvement and service outcomes

A detailed critical analysis matrix was developed, based on approaches described by Davies (2006) and Cowden et al. (2011). The characteristics of the included studies are found in Table 6.

Table 6: Practice development and allied health critical analysis matrix

Author, year, journal, country	Peer review	Theme				Context/setting	Rigour (CASP 2010; Young and Solomon, 2009)	Focus, subjects, data	Value
		I*	II	III	IV				
Andersen (2012) *International Practice Development Journal* Australia	Yes	x				Elderly patient, multidisciplinary team	N/A	Reflection of the effect of communication and language of a healthcare team, as illustrated using a case study	Application of practice development (PD) as viewed by an allied health professional (AHP)
Andvig and Biong (2014) *International Practice Development Journal* Norway	Yes				x	Mental health centre	High	Action research project that explored how conversations were used as tools in person-centred recovery. Qualitative analysis from focus groups show prerequisites for conversation, the focus of conversation and the views of conversational topics by health professionals (n=15, including occupational therapists, social workers and social educators)	Team diversity in opinion and approach through recovery-oriented conversations can be assisted using dialogue-based teaching
Bates (2000) *Journal of Orthopaedic Nursing* UK	No	x	x			Elective orthopaedic ward. Accreditation as a practice development unit (PDU)	Low	Specific references were made to physiotherapy, occupational therapy and pharmacy in the process of PDU accreditation. Limited information about methods, design, clinical outcomes and service improvements. Lacked substantiating evidence	Reported team outcomes include accreditation, improved team relationships, shared responsibility and skill development
Bray, et al. (2009) *Practice Development in Health Care* UK	No	x	x				Moderate	Multidisciplinary staff working on six PDU units. A self-completion questionnaire distributed to all staff within the PDUs (n = 625, 28.2% response rate) followed by 17 semi-structured telephone interviews. Total of 114 respondents (64%) would recommend PDU accreditation to other units. Study was limited by the poor response rate. The number of responses from AHPs was not specified.	PDU accreditation can have a positive influence on team working, evidence-based practice and improving opportunities for professional development
Cambron and Cain (2004) *Creative Nursing* US	Yes	x	x			Palliative care service on becoming a PDU	N/A	Reflections of a project that involved a shared leadership model with nurses, social workers, chaplains and nursing assistants. Noted their unit is the only accredited PDU in the US, despite the growth of PDUs in the UK and elsewhere	A whole-team approach using PD methodology facilitated decentralised decision-making and empowerment of patients

Table 6 *(continued)*: Practice development and allied health critical analysis matrix

Author, year, journal, country	Peer review	Theme				Context/setting	Rigour (CASP 2010; Young and Solomon, 2009)	Focus, subjects, data	Value
		I*	II	III	IV				
Chambers et al. (2013) *Journal of Psychiatric & Mental Health Nursing* UK	Yes			x	x	Mental health PD training programme	High	Mixed methods action research approach with multidisciplinary staff from two inpatient mental health wards and a psychiatric intensive care unit. The programme was part of a wider three-phase study and was evaluated using well-defined/described formal measures of evaluation	The PD programme led to gains for participants. However study was ongoing
Covill and Hope (2012) *British Journal of Community Nursing* UK	Yes	x	x		x	PD as a framework for multiprofessional working	Low	Case study on change of practice in falls reduction in a localised community setting using a PD framework and facilitated by leaders of PD in a university setting. Identified that PD frameworks are conducive to developing leadership and management roles via a democratic process and potential for multiprofessional PD locally and further afield. No stated clinical outcomes of the programme (such as % of falls in the unit)	Single case study design, which highlights the requirements for a multiprofessional approach to reflect real experience
Devenny and Duffy (2014) *Nursing Standard* UK	Yes		x			Framework for person-centred reflective practice used by a stroke team	Low	A PD framework was developed involving nurses, a physiotherapist and a physiotherapy assistant. Formal and informal findings reported. However there was no evidence of formal data collection or of formal thematic review or analysis	Study reported improved communication and listening skills; however applicability was limited by study design
Elliot and Adams (2012) *Nursing Older People* UK	Yes			x		Multidisciplinary education and training team for staff caring for older people in the mental health aged care sector	Moderate	The programme trained multidisciplinary team in person-centred dementia care approaches. Effectiveness was evaluated using the Approaches to Dementia Care Questionnaire (ADQ), which showed an increase in at least one (84%) or two (38%) attitude dimensions and a decrease in negative attitude by some (7%). AHP participation described. Positive informal feedback was reported but not well described. Project challenges were reported	Limited evaluation data restricted the study's value

Table 6 *(continued)*: Practice development and allied health critical analysis matrix

Author, year, journal, country	Peer review	Theme				Context/setting	Rigour (CASP 2010; Young and Solomon, 2009)	Focus, subjects, data	Value
		I*	II	III	IV				
Hunnisett (2011) *International Practice Development Journal* UK	Yes	x				Reablement unit for older people	N/A	Reflections of being a PD facilitator with a team and in the multidisciplinary work environment	Application of PD as viewed by an AHP
Kemp et al. (2011) *Mental Health Practice* UK	Yes	x	x		x	Mental health trust	Low	Star Wards and The Productive Ward programmes described. In the study, occupational therapists were involved in the Star Wards programme. Some outcomes were reported, however there was no substantiating evidence in relation to baseline and post-programme figures per ward/hospital. Limited participant profile	Occupational therapists described as important contributors but not substantiated
Lamont et al. (2009) *Practice Development in Health Care* Australia	No	x	x		x	Mental health unit	Low	Data collected using questionnaires pre and post initiatives. Views from staff (n=71), service users (n=84) and carers (n=42) were collected. The number of therapeutic group activities at ward level was assessed. PD committee expanded to include AHP after several months. AHP representation in the programme, clinical psychologist facilitated. Programme described the application of several core PD methods	The development of a joint workplace culture for change can surface team issues and promote ownership for change
Shaw (2012) *International Practice Development Journal* UK	Yes		x			NHS hospital clinical setting	High	Explored the impact of PD versus service improvement approaches on healthcare practitioners by comparing two team projects (an older persons' care ward exercise programme and improving mealtime experiences for older patients). AHPs were participants in the project. Results discussed two typologies related to person-centred, quality care – PD and service improvement	Both PD and service improvement processes can positively impact the quality of patient care for clinical personnel, including AHPs

Table 6 *(continued)*: Practice development and allied health critical analysis matrix

Author, year, journal, country	Peer review	Theme				Context/setting	Rigour (CASP 2010; Young and Solomon, 2009)	Focus, subjects, data	Value
		I*	II	III	IV				
Sin et al. (2003) *Journal of Psychiatric & Mental Health Nursing* UK	Yes			x		Staff training and education in a mental health trust	Low	The paper described author experiences in establishing family and carer interventions through curricular development. Participants included nurses, social workers and occupational therapists. Evaluation comprised feedback from families/carers and other formal assessment tools (such as Carers Assessment of Managing Index)	No measures were reported in this paper, which limited applicability
Walsh and Walsh (1998) *Nursing Standard* UK	Yes	x	x			Teamwork was a critical factor in a surgical unit becoming a PDU	Moderate	The Team Climate Inventory was used to evaluate the level and quality of teamwork in preparation for becoming a PDU. Participants (n=33) included nursing, one representative from 'each allied health profession', medical staff, secretaries and healthcare assistants. Results showed individual and team investment was required before the move to become a PDU. Study limitations were described	Team diagnostics in relation to PD is of importance

Key to themes
I* = Enhanced multidisciplinary teamwork
II = Practice development frameworks and outcomes
III = Practice development education / learning
V = Quality and service delivery outcomes

A summarised critical appraisal of the research articles follows. To highlight the consistency of findings across papers, the articles have been organised into key themes, although most papers addressed more than one theme.

Theme 1: Enhanced multidisciplinary teamwork
The majority of papers selected (n=9) involving AHPs address the importance of team-based approaches and/or multidisciplinary teamwork. The context and healthcare settings described in these papers is variable and includes practice development units, mental health care, palliative care and local settings.

a) Practice development units
Several papers specifically involve team approaches in relation to practice development units. These are units that aim to innovate and improve practice in order to enhance the quality of patient care (Bates, 2000). To achieve practice development unit status a ward/service must meet a set of specific standards, including multidisciplinary team involvement in practice development initiatives. Four of the selected papers describe how individual units involved allied health in forming and/or accrediting a practice development unit (Walsh and Walsh, 1998; Bates, 2000; Bray et al., 2009; Covill and Hope, 2012).

One paper outlines the process undertaken by an elective orthopaedic ward in a UK hospital to become an accredited practice development unit. Specific references are made to physiotherapy, occupational therapy and pharmacy (Bates, 2000). However, the paper's usefulness is limited by a paucity of information in relation to clinical outcomes and service improvements resulting from the change. No substantiating evidence for any of its claims is provided.

An exploration of the perspectives of a multidisciplinary team on the process of becoming a practice development unit using a questionnaire and semi-structured interviews is presented in another paper (Bray et al., 2009). The authors report three primary themes relating to accreditation arising from the project: having a positive influence on multidisciplinary teamworking; improved application of evidence-based practice; and enhanced opportunities for professional development.

This descriptive study is limited by a number of factors, including the poor response rate to the questionnaire. This restricts the transferability of the findings. The proportion of the 114 respondents who were AHPs is not specified, although responses from two allied health disciplines (physiotherapists and occupational therapists) are quoted in the report (Bray et al., 2009).

A third study describes a project where the Team Climate Inventory (Anderson and West, 1996) was used to help a surgical ward evaluate the level and quality of teamwork in preparation for becoming a practice development unit (Walsh and Walsh, 1998). Participants in this study (n=33) were from the selected ward and included nursing personnel, one representative from 'each of the allied health professions' (p 37), medical staff, medical secretaries and healthcare assistants. The survey results indicate that an investment in the development of individuals and the team was required before the move to become a practice development unit. The limitations of the study, such as data collection, are well described. Despite this, the applicability of the Team Climate Inventory and the importance of team diagnostics are well illustrated in this study.

One case study uses practice development as a framework for multiprofessional working and to highlight its potential as a vehicle for change and enhanced clinical governance (Covill and Hope, 2012). The case study is a brief synopsis of change in practice in relation to risk and falls assessment in a community rehabilitation team. This descriptive paper outlines the inclusive, multidisciplinary approach taken to the management of falls, noting that the numbers of falls had decreased, a change

extrapolated as being of financial benefit. However, the authors provide no specific details of the clinical outcomes of the programme, such as the actual number of falls. While they report staff outcomes (increased awareness, a shared understanding across physiotherapy and occupational therapy), they do not quantify or describe how this was collected, measured or evaluated.

b) Mental health care
The use of practice development as an explicit way to enhance multidisciplinary mental health care teamwork is reported in two studies. A four-stage participatory action research study, co-authored by a clinical psychologist in an inpatient mental health care unit, describes the inclusion of AHPs in the exploration and critique of issues relating to workplace culture (Lamont et al., 2009). A second study notes that occupational therapists were important contributors to their local practice development programme and outlines the significance of their involvement (Kemp et al., 2011). Findings from these studies are of limited applicability based on the lack of detail in relation to participants, reflexivity and the selected measures (Critical Appraisal Skills Programme, 2010).

c) Palliative care
A shared multidisciplinary leadership model is identified within a palliative care service in the US (Cambron and Cain, 2004). In this study, the practice development process involved nurses as well as social workers, chaplains and nursing assistants. This brief descriptive article highlights the importance of a whole-team approach using practice development methodology to facilitate decentralised decision making and empowerment of patients. While not a scientific paper, this article describes insights in the local processes of introducing practice development in an environment where there is limited application.

d) Individual application of practice development
Two authors describe their personal reflections and clinical perspectives as physiotherapists working in multidisciplinary teams (Hunnisett, 2011; Andersen, 2012). One author describes her journey as a facilitator with her team and in the multidisciplinary work environment (Hunnisett, 2011). The other author discusses the ways in which practice development improved communication and language within a healthcare team to the beneift of patient care (Andersen, 2012). While not research articles, these papers illustrate the specific application of practice development approaches by two allied health clinicians within their workplace.

Across these nine studies, several papers report some outcomes, including attaining practice development unit accreditation, improved team relationships and shared responsibility for actions (Walsh and Walsh, 1998; Bates, 2000; Bray et al., 2009) as well as decentralised decision making and empowerment of patients (Cambron and Cain, 2004). These results, however, are not comprehensively substantiated. While the papers outline the inclusive, multidisciplinary approach taken to enhance clinical care, they lack essential process and outcome information.

Theme 2: Practice development framework and principles
a) Practice development framework
Several of the papers reference the use of practice development as their framework, notably as part of the journey to becoming an accredited practice development unit (Bates, 2000; Bray et al., 2009; Covill and Hope, 2012).

One research paper explores the impact of practice development approaches on healthcare practitioners, using the experiences and approaches of two team projects to illustrate differences in the broad application of practice development across the NHS in the UK (Shaw, 2012). Results form part of a critical discussion of two typologies in relation to the provision of person-centred, quality healthcare – practice development and service improvement.

b) Practice development principles
As set out in Table 1, there are nine core principles of practice development, which describe the practical, theoretical and philosophical factors that underpin practice development (Manley et al., 2008a). Nine of the articles reviewed (60%) describe one or more of the practice development principles, reflecting the relevance of these principles to their research involving AHPs.

Person-centred care approaches (principle 1), reflecting the aim of practice development to facilitate person-centred healthcare delivery, are highlighted in four articles (Chambers et al., 2006; Lamont et al., 2009; Shaw, 2012; Devenny and Duffy, 2014).

Devenny and Duffy (2014) describe a framework for person-centred reflective practice, used in Scotland and based on the tenets of clinical pastoral education used by clinical spiritual care specialists or chaplains along with the person-centred nursing framework (McCormack and McCance, 2006). The framework was developed using a modular programme involving nurses, a physiotherapist and a physiotherapy assistant from the intermediate stroke care team (Devenny and Duffy, 2014). The authors discuss the evaluation of the education module and offer observations on the use of the framework. There is no evidence of formal data collection or of formal thematic review or analysis. Findings from this study are of clinical relevance in practice but applicability is limited by the lack of detail in relation to participants, reflexivity and project measures.

Practice development principle 2, where attention is directed at the microsystem level and improvement of care is determined by the staff providing that care, is highlighted in two papers (Lamont et al., 2009; Covill and Hope, 2012). This reflects the principle of the focus of change being on where care is delivered. Workbased learning approaches and use of evidence (principles 3 and 4) are also described in two papers, reflecting the role of active learning in the workplace (Cambron and Cain, 2004; Lamont et al., 2009). The blending of creativity with cognition (principle 5) is referenced by Lamont et al. (2009), where creative means were used to facilitate learning.

Interprofessional networking and multidisciplinary working (principle 6) is illustrated in a number of papers (Walsh and Walsh, 1998; Cambron and Cain, 2004; Bray et al., 2009; Kemp et al., 2011; Covill and Hope, 2012). These papers reflect the importance of team-based, multidisciplinary approaches. Principles 7 and 8, where methods and processes underpin practice development approaches, are explicitly addressed in two papers (Cambron and Cain, 2004; Lamont et al., 2009). Evaluation using inclusive, participatory and collaborative approaches (principle 9) is described in one paper (Shaw, 2012).

Theme 3: Practice development education and learning programmes
Three papers describe multidisciplinary learning approaches using practice development. Although they do so in the context of a mental health care setting, learnings from these programmes may be suitable for other clinical settings.

One study describes a multidisciplinary education and training programme developed for staff who worked with clients in mental health for older persons. The team included psychologists, nurses, an occupational therapist, speech and language therapists, a pharmacist and an administrator (Elliot and Adams, 2012). The programme comprised five sessions of three hours each and was reported to have combined elements of transactional and emancipatory practice development to train participants in person-centred dementia care approaches.

Effectiveness is evaluated using the Approaches to Dementia Care Questionnaire (Lintern, 2001, cited in Elliot and Adams, 2012). Positive informal feedback is reported but not well described. Some project challenges are reported, including bureaucracy, staff turnover and the limited project timeframe (Elliot and Adams, 2012). The authors note that while staff feedback was positive, the timeframe of the programme limited evaluation because outcome data (such as inappropriate hospital admissions) could not be collected.

Another study describes the formation of a network of services for carers and people with psychoses, using practice development initiatives for staff training and education, integration and to foster collaboration (Sin et al., 2003). Participants included nurses, social workers and occupational therapists, with topics covered including the Interventions for Psychosis programme (Sin et al., 2003) clinical supervision and family/carer-centred practice.

Evaluation comprises feedback from families and carers and other formal assessment tools, such as the Carers Assessment of Managing Index (Nolan, Keady and Grant, 1995), as well as sessional feedback. The authors note that in the longer term, the data will be evaluated for impact and will include quantitative measures such as relapse rates and hospitalisations. No measures are reported in this paper, which limits its applicability.

A further study explores the development and evaluation of a mental health care practice development training programme directed towards optimising the experiences of service users during hospitalisation (Chambers et al., 2006). This study uses a mixed-methods action research approach with participants (including occupational therapists and healthcare assistants) from two inpatient mental health care wards and a psychiatric intensive care unit. Qualitative results suggest that the programme led to professional and personal gains for participants.

The authors concede that the small study and short timeframe limits generalisability, and that there is a need to extend the programme in order to further enhance learning. However, the strength of the other aspects of this article enhances the rigour of reported findings.

Theme 4: Clinical quality improvement and service delivery outcomes
Several of the selected papers discuss how practice development methods and approaches were used to drive quality and service outcomes within their healthcare setting, including mental health care (Lamont et al., 2009; Kemp et al., 2011; Andvig and Biong, 2014) and rehabilitation (Covill and Hope, 2012).

One paper explores how conversations were used as tools in person-centred recovery within a therapeutic mental health care setting (Andvig and Biong, 2014). Using qualitative analysis from focus groups, the authors describe the prerequisites for and focus of conversations, and the views about conversational topics of healthcare professionals (n=15), including AHPs. Results from this study illustrate diversity in opinion and approach among the team in relation to the use of recovery-oriented conversations.

Another study reports on a practice development project aimed at service-level improvement across nine acute inpatient wards at a NHS mental health trust, involving two local initiatives – the Star Wards and Productive Ward programmes. Star Wards aims to enhance 'therapeutic provision and engagement' (Kemp et al., 2011, p 20) in order to improve the experience and treatment outcomes of service users. The Productive Ward scheme aims to improve safety, efficiency and reliability of nursing care by freeing time for direct patient care. In the study, occupational therapists were involved in the Star Wards programme (Kemp et al., 2011).

The author's state that six of the nine wards achieved their target, with three wards demonstrating improvement. Specific outcomes, such as total number of hours spent in direct patient contact, are reported. However, substantiating evidence in relation to baseline and post-programme figures per ward/hospital is not offered. The characteristics of the people surveyed are not provided and the report lacks specificity in terms of ethics, reflexivity and methods of evaluation.

Two other articles reviewed involve service delivery. These, however, are of a small scale and short-term nature. One describes service delivery outcomes in relation to falls (Covill and Hope, 2012)

and another the introduction of unit-based improvements, including a multidisciplinary orientation manual, a weekly case presentation forum, enhanced consumer programme timetabling and the use of suggestion boxes (Lamont et al., 2009). Specific details of patient, staff or service outcomes are not reported in either study. The papers do not adequately describe service delivery measures, evaluation methodology or service delivery outcomes, nor state how initial gains could be sustained by embedding change in everyday practice. It is acknowledged, however, that the papers aim to describe local grassroots initiatives and so did not involve formal qualitative analysis and evaluation.

Quality review

As summarised in Table 6, findings from a number of the 15 papers are of limited applicability due to inadequate research rigour, notably a lack of detail about participants, outcomes, reflexivity and selected measures (Critical Appraisal Skills Programme, 2010). Seven papers (47%) were published in journals that were not verified by Ulrich's. Although this does not necessarily reflect the quality of the publications, it may limit the extent to which the articles are disseminated and cited by others (Callaham et al., 2002).

Six of the articles (40%) were rated as low quality, three as medium quality (20%) and three as high quality (20%). The lower-quality articles did not report substantiated staff or service outcomes and also lacked specificity in terms of ethics and methods for evaluation (Critical Appraisal Skills Programme, 2010). This means these papers are less reliable and are not able to be easily generalised to the broader healthcare environment. Rigour was not able to be assessed in the remaining three papers (20%), which limits their applicability.

Discussion

Using the tools for critical appraisal, only 20% of the articles that were selected as part of this review were rated as high in quality, while 60% were rated as being of an academic standard that limited their level of rigour and more general applicability. However, there were observations that could be made in the context of the overall practice development literature.

The literature review found that AHP involvement in practice development was reported to be important for effective teamwork, shared governance and learning, and for leadership in effecting healthcare system improvement and change at micro and macro levels. The published research indicated that practice development units (where evidence of multidisciplinary teamwork is required for accreditation) have, to date, been a primary driver for AHP involvement. Mental health care settings were featured most in the studies involving AHPs (n=5; 33%).

Despite the growing body of literature pertaining to practice development (McCormack, 2010), there remains a paucity of projects and studies specifically referencing AHPs. Synthesis of the recent practice development literature showed that a relatively small number of practice development authors have published research that features AHPs. The literature review identified only two reflective commentaries authored by AHPs and one research paper co-authored by an AHP. Peer-reviewed research studies specific to AHPs and allied health practice could not be identified.

Several of the selected articles made only limited reference to allied health. Encouragingly, however, there has been an increase in studies involving allied health published since 2011, reflecting the spread of practice development across healthcare (McCormack, 2010; McCormack and McCance, 2017a).

Several implications for AHPs arise from the literature review. Practice development enhances clinician and team engagement and promotes high standards of clinical care (Manley et al., 2008a; Clarke and Wilson, 2008; Manley et al., 2011a). With research increasingly demonstrating the efficacy of practice development (McCormack et al., 2013), AHPs should be encouraged to engage with and apply practice development methods in the context of their clinical practice. This may require specific action to foster interest and demonstrate the relevance of practice development to AHPs. Attention to creating a

shared narrative relating to person-centred care and practice development may also be needed. There are also opportunities for existing practice development activities and research initiatives to expand and develop allied health involvement, although this will require stronger systems to engage and support AHPs. The shared ambition for optimal patient care could provide a common platform from which to facilitate inclusion of allied health along with other team members in practice development initiatives (Nehrenz, 2009).

Implementation of practice development more widely across the healthcare system would be strengthened by involvement of leadership personnel at the mezzo and macro systems levels. For allied health, this could entail engaging managers and directors of allied health in a similar way that practice development in nursing and midwifery is supported by directors of nursing and nurse managers.

There is, as McCormack (2010) states, the potential for multiple perspectives to further develop the future of practice development in an integrated and transformative way. There is thus an opportunity to build on existing involvement by AHPs, including greater participation in leading practice development initiatives and research.

Limitations

There are several limitations to this literature review. The evolving nature of the practice development literature (McCormack, 2010) means some of the views expressed in earlier papers from the 1990s and early 2000s have been superseded by evolving theoretical frameworks and new evidence.

A further limitation relates to the variable definition of allied health across jurisdictions and across countries (Pickstone et al., 2008). Therefore, the use of the New South Wales definition as the basis of this review may have affected the total number of studies that were included. In addition, a number of the papers described the process of being accredited as practice development units, which are UK-based initiatives and do not exist in New South Wales.

Although it is recommended that two or more reviewers assess individual studies for context and quality (Pai et al., 2004), the papers cited in this paper were reviewed and analysed by the first author as part of her PhD candidacy. Any study where there was ambiguity was discussed with supervisors to achieve consensus, thereby minimising the impact of this approach.

Conclusion

Practice development is a structured methodology and approach to healthcare improvement that focuses on emancipatory change at the level where care is provided, leading to person-centred, evidence-based healthcare (Manley et al., 2008a; McCormack et al., 2013). Its origins are in the development of nursing practice and the practice development literature to date has reflected this (Manley et al., 2008a). A review of the practice development literature showed a limited number of published reports involving AHPs. No peer-reviewed practice development research studies specific to AHPs and/or allied health practice were identified.

There are opportunities for current practice development activities and research initiatives across healthcare systems to grow allied health involvement. To do this, systematic strategies to foster interest in practice development, a shared understanding of the language of practice development and stronger systems to engage AHPs are required.

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