Testing the effectiveness of a Practice Development intervention as an enabler of allied health leadership development

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A thesis in fulfilment of the requirements for the degree of Doctor of Philosophy

Health Services Management

Faculty of Health

University of Technology Sydney

2018

Certificate of Original Authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

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Date: **29th June 2018**

This research is supported by an Australian Government Research Training Program Scholarship.

Acknowledgements

I am profoundly and sincerely grateful for the contribution of many people who provided support, wisdom and expertise to me over my research journey.

Tamera Watling – thank you for the significant role you played in the success of the program as co-facilitator of the workshops and for your involvement in the action learning sets and coaching. You were a joy to work alongside.

The research participants – I am so thankful for the many volunteers who willingly agreed to participate in the project as part of the control and the intervention groups. To the control group participants, I will be forever indebted for your involvement in the study despite the absence of personal gain. For program participants, thank you for the shared learnings, your willingness to be involved in action research, your enthusiasm and your growth – what a privilege to share the learning journey with you all.

My expert reference group Karen Tuqiri, Maria Jessing, Steve Bowden, Sally Laugesen and Paula Caffrey – I am deeply grateful for your willingness to share your experience and wisdom. What a difference you made. Robin Girle and Ruth Smoother – thank you for your assistance with coaching in the 2015 program. Damien Kendrick – thank you for helping to facilitate the learning sets in 2015. Matthew Sidebotham – thank you for proof-reading the final draft of the thesis.

My supervisors Professor Joanne Travaglia and Professor Andrew Hayen – you are the best supervisors in the whole world. I hope you know how much your support, encouragement and extraordinary expertise have meant to me. Andrew, thank you for your constructive feedback, sage advice and for keeping me on track. Jo, you have been an inspiration, role model and a tremendous source of wisdom since I met you. Thank you for seeing my potential and believing in me.

My family – my daughter Danielle, for all her suggestions and for her never-ending encouragement and unfailing belief that I could do this. You are beautiful inside and out. My gorgeous son Jacob, for guiding me with the statistical analysis and for supporting me through some hard times. My wonderful husband John, who has supported and been alongside me from day one. I am truly blessed.

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List of Abbreviations

AI	Appreciative Inquiry
ALS	Action Learning Set
CASP	Clinical Appraisals Skills Programme
CEC	Clinical Excellence Commission
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CLP	Clinical Leadership Program
CLI	Clinical Leadership Inventory
DAH	Director(s) of Allied Health
FoNS	Foundation of Nursing Studies
FTE	Full-time equivalent
HETI	Health Education and Training Institute
IIMS	NSW Incident Information Management System
IPDJ	International Practice Development Journal
LBQ	Leadership Behaviour Questionnaire
LEAHP Program	Leadership Excellence for Allied Health Professionals Program
LHD	Local Health District
LPI	Leadership Practices Inventory
MLQ	Multifactor Leadership Questionnaire
NDU	Nursing Development Unit
NHHRC	National Health and Hospitals Reform Commission
NHMRC	National Health and Medical Research Council
NHS	National Health Service
NSW	New South Wales

ORBIT	Online Reporting Business Intelligence Tool
OT	Occupational therapy
PAR	Participatory Action Research
PDU	Practice Development Unit
POWH	Prince of Wales Hospital
PRAXIS	Purpose, Reflexivity, Approaches, ConteXt, Intent, Stakeholders
PUGQ	Positive, Unconditional Generative Question
SESLHD	South Eastern Sydney Local Health District
SGH	St George Hospital
SN	Speciality Network
SPSS	Statistical Package for the Social Sciences
SSEH	Sydney/Sydney Eye Hospital
TSH	The Sutherland Hospital
UK	United Kingdom
UWES	Utrecht Workplace Engagement Scale

List of Appendices

List of publications and presentations arising from this thesis

Publications:

'Allied health leadership in New South Wales: a study of perceptions and priorities of allied health leaders' (March 2017), *Australian Health Review;* https://doi.org/10.1071/AH16135

'Leadership in Allied Health – A Review of the Literature' (May 2017), *Asia Pacific Journal of Health Management;* 12(1), 17–24.

'Practice development and allied health – a review of the literature' (November 2017), *International Practice Development Journal;* 7(2)[7], 1-25; https://doi.org/10.19043/ipdj.72.007

Presentations:

Invited guest presenter: *Developing allied health leaders to enhance person-centred care*, December 2017, Sydney Local Health District Bi-annual Allied Health Research Forum, Sydney, Australia.

Invited workshop presenter and co-facilitator: *Translating Quality and Safe Care into Practice*, August 2017, 12th National Allied Health Conference, Sydney, Australia.

Invited workshop presenter: *Transformational and Adaptive Allied Health Leadership*, August 2017, Allied Health Leadership Day, 12th National Allied Health Conference, Sydney, Australia.

Invited expert panelist: Allied Health Leadership Day, August 2017, 12th National Allied Health Conference, Sydney, Australia.

Oral paper presentation: *Taking the LEAHP – Developing allied health leaders to enhance person-centred healthcare*, August 2017, 12th National Allied Health Conference, Sydney, Australia.

Oral paper presentation: *Creating futures - Speech pathologists leading the way*, May 2017, Speech Pathology Australia National Conference, Sydney, Australia.

The Leadership Excellence for Allied Health Professionals *(LEAHP) Program*, January 2017, NSW Directors of Allied Health State Meeting, Sydney, Australia.

Oral paper presentation: *Developing allied health leaders to enhance person-centred healthcare*, September 2016, International Enhancing Practice Conference, Edinburgh, Scotland.

Invited workshop presenter and facilitator: *Strategies to foster a culture of improvement*, February 2016, Evaluation Performance against the National Standards Conference, Brisbane, Australia.

NSW Allied Health Leadership Development Program, December 2015, NSW Directors of Allied Health State Meeting, Sydney, Australia.

Invited workshop presenter and co-facilitator: *Improvement and Implementation Science*, November 2015, National Allied Health Conference, Melbourne, Australia.

Allied Health Leadership and Governance, January 2015, Northern Sydney Local Health District Strategic Planning Forum, Sydney, Australia.

NSW Allied Health Leadership Survey - A study of perceptions and priorities of allied health leaders – Summary of Findings, December 2014, NSW Directors of Allied Health State Meeting, Sydney, Australia.

Oral paper presentation: *Leading the Future for Allied Health – A Governance Perspective*, October 2013, National Allied Health Conference, Brisbane, Australia.

Abstract

Practice development is an umbrella term that incorporates a variety of methods used to develop healthcare practice. It is underpinned by the concepts of person-centredness, culture, values, context and evidence-based practice.

Allied health clinicians are tertiary-qualified members of the healthcare team who work across the care continuum to provide a range of therapeutic interventions. Although effective healthcare provision is said to require leadership at all levels of an organisation, allied health leadership has not been extensively investigated in the literature, nor has its involvement with practice development.

This mixed methods study investigated the area of leadership development of allied health practitioners and examined whether practice development methodologies were effectual in equipping allied health leaders with skills that improved leadership effectiveness and enhanced the provision of person-centred healthcare. The principal aim of the study was to evaluate the outcomes of an allied health leadership development program – underpinned by the principles of practice development and transformational leadership– conducted in a large Australian public healthcare organisation. The effectiveness of this approach to enhancing allied health practice was tested.

This research commenced with a critical analysis of the allied health and leadership literature and of the use of practice development by allied health clinicians. An investigation was also undertaken with allied health leaders to describe and better understand the context and issues for allied health clinicians in New South Wales as well as to identify specific cultural aspects of allied health.

An allied health leadership framework was developed, informed by practice development and transformational leadership theories. This was followed by the design, implementation and evaluation of a ten-month allied health leadership program. The program was evaluated using a randomised control trial involving the use of a stratified, randomised pre-test/post-test group design, with a control group, to quantitatively measure the culture, engagement and leadership skills of study participants before and after the implementation

of the *South Eastern Sydney Local Health District Allied Health Leadership Development Program* (the intervention) in 2014–2015. A range of qualitative measures were also collected. A second leadership program was undertaken with an unmatched intervention group in 2015–2016.

The study examined whether the program enhanced leadership capability and improved workplace cultural measures. It also measured whether the program led to quantifiable practice change, service improvement and enhanced clinical governance, including specified measures of quality and safety.

This research found that the program led to demonstrable outcomes in transformational leadership, leadership outcomes, workplace culture and workplace engagement. It provided robust new evidence about the effectiveness of using person-centred approaches for allied health leadership development.

This study is unique in its contribution to advancing research pertaining to allied health leaders and leadership. It provides a new, empirically-based leadership development program for allied health and describes a novel approach using a randomised control trial method to evaluate an allied health leadership framework.

Chapter 1: Introduction

1.1 Background

The provision of accessible, high-quality public healthcare is a key role of government. Health services are continually challenged to provide better health, equitable access and quality services within a context of growing demands from an increasing and ageing population, the need for new services in growth areas and financial constraints (NSW Health, 2015). The ability of healthcare systems to implement and sustain strategic change initiatives requires strong leaders (Block & Manning, 2007).

In response to these healthcare demands, along with the requirement to create an agile system focused on the patient, *practice development* has been proposed as a mechanism to create positive change within a healthcare service by enhancing person-centred, evidence-based healthcare. Practice development is underpinned by a set of core principles that, when applied in practice, aims to build authentic engagement with individuals and teams. To achieve these aims, it uses participatory, inclusive and collaborative approaches. Using facilitation as an enabler, practice development recognises the importance of the clinical practice skills and wisdom, and the personal strengths, imagination and creativity, of clinicians. It is said to transform individual and team practices by promoting workplace flourishing (Manley et al., 2008a; McCormack &McCance, 2017a).

Despite the growing application of practice development approaches in the New South Wales (NSW) public health system by nurses and midwives (NSW Health, 2009c; NSW Health, 2010), there is limited awareness and application of practice development among allied health professionals. In a similar way, there is a paucity of allied health-specific leadership development programs in NSW, and an apparent lack of information regarding allied health leaders and allied health leadership in Australia and more broadly (Joubert et al., 2016).

As with other healthcare professionals, leadership is of great interest to allied health practitioners (O'Connor, 2003; Joubert et al., 2016). Transformational leadership occurs where there is an environment of collaboration, where the allied health professional and their manager engage in such a way that they achieve greater levels of dedication, output

and motivation. This process leads to a stronger alignment between the leader and the follower (Miller & Gallicchio, 2007). Transformational leadership has application in the healthcare sector (Stanley, 2008) and is considered a central construct of practice development (Solman & Fitzgerald, 2008; Akhtar et al., 2016).

The aim of this research was to design and conceptualise a leadership framework for allied health professionals and to use this to develop, implement and empirically evaluate an allied health leadership development program underpinned by the principles of practice development in order to test the effectiveness of this approach in enhancing allied health practice. In addition, this study explored the concept of transformational leadership within health as it pertains to allied health professionals, and evaluated whether individual leadership development of allied health practitioners using practice development could lead to enhanced transformational leadership behaviours and positive healthcare outcomes. This research is significant, as these are topics of limited investigation in the current literature.

To inform the leadership framework and provide context to the study results, a study was also undertaken with allied health leaders. This aimed to describe the context and issues for allied health clinicians in NSW as well as to identify specific cultural aspects of allied health as identified by allied health leaders.

In this study, the researcher developed the leadership program and also undertook the intervention and evaluation. As this could be perceived as creating bias, a range of actions were undertaken to minimise the impact of the researcher on the study. This is explored further in Chapter 5.6.

1.2 Definition of allied health

Allied health practitioners are tertiary-educated healthcare professionals who work as core members of the healthcare team to optimise clinical outcomes for patients (Pickstone et al., 2008). They use their knowledge and skills to restore and/or maintain optimal psychological, cognitive, physical, sensory and social function of patients (Grimmer-Somers et al., 2009; Lowe et al., 2007; Wagner et al., 2008). They have a range of specific skills and competencies (Mueller & Neads, 2005) and play a significant role in healthcare delivery (Wylie & Gallagher, 2009).

The NSW Health Education and Training Institute (HETI) developed criteria to define which disciplines are included in the 'allied health' professions in the public health system in NSW, Australia. HETI states that allied health professionals are clinical health professionals who are tertiary qualified and are registered, licenced or accredited to practice in their State or Territory of Australia. They can work in the public or private healthcare sector and provide therapeutic and diagnostic services. Allied health professionals have complex professional skills in clinical reasoning, communication, reflection and using evidence clinically and they utilise their abilities to optimise the functional abilities of patients. They work as part of a multidisciplinary team across the healthcare spectrum and provide services in a range of settings (HETI, ND). The HETI description of allied health has been applied for the purposes of this research.

In the NSW public health sector, 23 disciplines are identified as allied health: 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, social work, speech pathology and welfare (HETI, ND; NSW Health, 2017; Wagner et al., 2008).

Despite the relatively recent emergence of a collective cultural identify for allied health in NSW and Australia more broadly, the evolution of organisational structures within the Australian public healthcare system has led to a greater opportunity to develop a new cohort of allied health leaders with stronger leadership roles and a greater capacity to influence (Boyce, 2006a; Boyce, 2006b). Part of this change has been the development of 'collective strength' through the promotion of allied health as an united entity, rather than individual allied health disciplines (Boyce, 2008, p.84). These allied health leaders will have the opportunity to positively impact the broader healthcare system through the application of effective leadership and clinical governance of allied health services (Boyce, 2008). These findings highlight the need for an allied health specific leadership framework and is a key element in substantiating the relevance of this research.

1.3 The Context for the Study

1.3.1 The Organisational Context

In 2011, the NSW public health system was organised into 15 Local Health Districts (LHD), eight of which cover the Sydney metropolitan region and seven rural and regional NSW. NSW Health also established Specialist Networks (SN) for justice and forensic mental health and for paediatric services, as well as a network for services provided by St Vincent's Health Australia (NSW Health, 2015). South Eastern Sydney Local Health District (SESLHD) is a large metropolitan-based LHD that services a population of approximately 890,000 people over nine Local Government Areas, from the Central Business District of Sydney city to the Royal National Park in Sydney's south (SESLHD, 2012).

SESLHD has seven Sydney-based public hospitals, which include two tertiary level hospitals (Prince of Wales Hospital and St George Hospital), two metropolitan hospitals (Sutherland Hospital and Sydney/Sydney Eye Hospital), a specialist maternity and women's hospital (Royal Hospital for Women) and two rehabilitation hospitals (War Memorial Hospital and Calvary Healthcare Kogarah). It also supports the remote NSW hospitals on Lord Howe Island (Gower Phillips) and Norfolk Island. SESLHD also has one public specialist residential aged care facility, along with 28 Child and Family Health Centres, 12 Community Health Centres and nine Oral Health Clinics, providing a range of community-based services. Specialist community services are provided in the clinical areas of drug and alcohol dependence, mental health, sexual health, public health, women's health and youth health (SESLHD, 2017).

In SESLHD, there were approximately 1200 employees classified as allied health in 2017, encompassing the disciplines of counselling, dietetics and nutrition, exercise physiology, genetic counselling, occupational therapy, orthoptics, pharmacy, physiotherapy, podiatry, psychology, social work and speech pathology. This number excludes the medical radiation science personnel of diagnostic radiography/medical imaging, nuclear medicine and radiation therapy. The medical radiation science disciplines were excluded from this study because they do not have a formal or an informal line of reporting to the Allied Health directorate in SESLHD and do not form part of the SESLHD allied health organisational structure.

It is additionally noted that there are no allied health practitioners employed in audiology, art therapy, music therapy, orthotics or play/child life therapy in SESLHD and that any staff employed as sexual assault or welfare officers are usually considered members of social work or psychology teams (SESLHD, 2017). The allied health professions who volunteered for – and were therefore included – in this study were psychology, dietetics, occupational therapy, pharmacy, physiotherapy, speech pathology, podiatry, orthoptics and social work.

The SESLHD context for allied health is similar to other publically funded healthcare organisations in NSW and Australia. This means that findings of the study will have relevance to other Australian healthcare organisations.

1.3.2 The political and policy context for clinician leadership

The *A Healthier Future for All Australians: Final Report* produced by the National Health and Hospitals Reform Commission (NHHRC) outlined the national health reform agenda to improve and develop the health system into the future. This report discussed the need to redesign the health system to address emerging challenges and emphasised leadership and governance as a central platform of the Commonwealth reform process (National Health and Hospitals Reform Commission, 2009).

In NSW, the NSW Ministry of Health (also called NSW Health) highlighted devolved and localised decision-making involving local clinicians as a key driver of improved patient care across the NSW health system (NSW Health, 2011). In releasing its revised governance framework, the Ministry of Health specified LHDs and SNs as owners of services and called for increased clinician leadership, engagement and support (NSW Health, 2011).

Other emerging themes within the healthcare policy context include the need for workforce redesign to meet changing clinical models of care and the introduction of extended scope of practice clinical areas within some professional disciplines. These are considered important issues affecting future service delivery models that require clinical knowledge, insight and leadership for successful implementation (NSW Health, 2011; Health Workforce Australia, 2012). Clinician leaders will, therefore, play an essential role in

ensuring effective clinical care in a changing healthcare environment and will be required by all clinical groups, including allied health.

1.3.3 The policy context for leadership in NSW

The *Special Commission of Inquiry: Acute Care Services in NSW Public Hospitals Report* was a landmark investigation into the NSW health system following a catastrophic clinical incident in a NSW hospital (Garling, 2008). Clinician-led change was a key recommendation of Garling's report, which expounded the expected role of clinician leaders as influencers and agents of positive change as part of the health reform agenda (Garling, 2008).

Garling's report detailed the importance of leadership across the whole of the health service and included a specific recommendation in relation to leadership training for clinicians (recommendation 36.1b) (Garling, 2008). This was supported by NSW Health, as detailed in their response to the Special Commission of Inquiry report, *Caring Together: The Health Action Plan* (NSW Health, 2009a). Given these mandates, it was timely to ascertain the leadership development requirements for allied health clinicians.

1.4 Allied health organisation in NSW and SESLHD

1.4.1 Organisational structures

The most senior allied health position in NSW public healthcare LHDs and SNs is the Director of Allied Health. In most NSW LHDs and SNs, there is a Director of Allied Health – at Tier 2 or Tier 3 of the organisation – who is a member of the senior executive team. With the formation of SESLHD in 2011, a fulltime Allied Health Director was appointed at Tier 2, reporting (at that time) to the SESLHD Chief Executive.

Since its inception and until the present time, the SESLHD Director of Allied Health position has been a strategic role, with no operational (line-management) responsibility outside of a small group of direct reports. The position oversees leadership and governance of allied health systems as well as the provision of individual senior clinician support and development.

Within SESLHD from 2011 to 2016, allied health services had an operational line of reporting via a sector model (group of hospitals) to a senior sector discipline delegate, with

a professional line of reporting to the Director of Allied Health. SESLHD allied health services were previously arranged in sector-wide discipline departments that functioned as one team across programs and hospitals across a geographical region. Allied health services in SESLHD were, however, restructured in 2016, moving from a sector model to a predominantly hospital-based model of service provision with District-wide Discipline Advisors. The new District Discipline Advisor positions are responsible for providing senior advice and leadership for their discipline across SESLHD, in partnership with the Director of Allied Health.

After 18 months of consultation and review, the broader District allied health restructure was finalised in February 2017. Along with the creation of Discipline Advisors, this saw the lines of reporting for the SESLHD Director of Allied Health move from the Chief Executive to the Director Primary and Integrated Health. The 2017 reporting and governance structure for SESLHD allied health services is illustrated in Figure 1.1 (Capper & Boss, 2017). It is noted that the restructure of the SESLHD allied health organisational structure occurred during the same period that this study was undertaken.

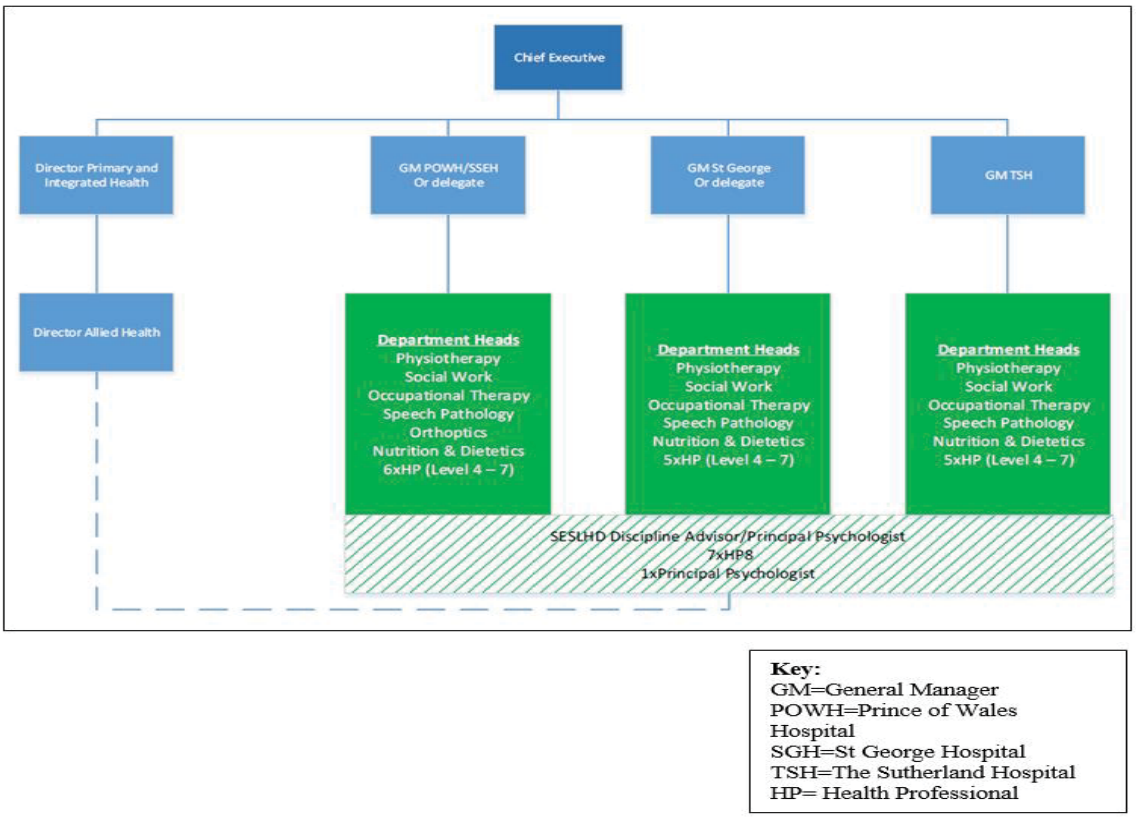

Figure 1.1 Reporting structure for allied health services in SESLHD, February 2017 (Capper & Boss, 2017)

1.4.2 Allied health industrial award classifications

The majority of allied health professionals in SESLHD are employed under one industrial award, called the *NSW Health Service Health Professions (State) Award*. This award was introduced in NSW in 2007 (NSW Health, 2017). A small number of allied health professions, including psychology and pharmacy, are employed under separate discipline-specific awards.

The NSW Health Professions Award stipulates that a graduate clinician is employed at Level 1 and automatically progresses with years of experience to Level 2. It also outlines more senior categories of employees that reflect either a managerial position or a clinical specialisation role. Categories of senior allied health staff range from Level 3 to Level 8, with Level 8 clinicians considered discipline leaders across an entire LHD or SN (NSW Health, 2017).

Allied health practitioners in NSW are considered to be in formal leadership roles once they have been appointed at Health Professions Award Level 3 or above. At Level 3 and above, clinicians are required to supervise others through leading a team (single discipline or multidisciplinary) or to be undertaking a clinical leadership role across a department or team. For example, clinicians graded at Level 3 and above may be a team leader of a group of personnel within social work, a head of department of a discipline such as podiatry, or a senior clinical specialist in a clinical area such as orthopaedics.

1.5 Rationale and aims for this study

The research involved the development of a leadership framework for allied health professionals that was used to design an allied health leadership development program. The leadership program was then implemented and empirically evaluated to determine its effectiveness. A qualitative study involving NSW allied health leaders was also undertaken, with the aim of ascertaining key issues for and identifying the cultural aspects of allied health. These results are integrated with findings from the main study.

This study was undertaken in order to ascertain the impact of an allied health leadership program in two main areas of study in relation to allied health professionals: practice development and transformational leadership. These focus areas were chosen due to the paucity of existing empirical research pertaining to allied health in relation to leadership

and to promoting safe, quality, person-centred healthcare, two areas considered by many to be essential for high-performance organisations (West et al., 2015; Leape & Berwick, 2000).

The specific aims of the study were:

1. To develop a leadership framework for allied health practitioners informed by transformational leadership and practice development theories and use this to design an allied health leadership program.
2. To evaluate the implementation of the leadership program for allied health clinicians within a NSW Local Health District (SESLHD).
3. To determine whether the program led to enhanced leadership capability, workplace engagement and workplace culture.
4. To determine whether the program led to demonstrable practice change and service improvement.
5. To ascertain whether the program led to measurable improvement in clinical governance, including specified measures of quality improvement.

1.6 Outline of the thesis

The thesis commences with an overview of practice development (Chapter 2), including a systematic review of the literature pertaining to allied health and practice development. This chapter describes the history and evolution of practice development and outlines its principles, methods and processes in greater detail. The chapter also discusses how practice development is used in healthcare to facilitate positive workplace change.

This is followed by a chapter on leadership (Chapter 3) in which several elements are explored, including leadership theory and leadership in healthcare. This chapter presents a systematic review of the literature about allied health and leadership. The initial chapters describe in detail the two fundamental elements of the research – practice development and leadership development.

Chapter 4 provides a contextual perspective on the clinical mandate for quality and safety in healthcare. It outlines the local, national and international literature on quality and safety as it pertains to allied health practitioners working in healthcare and discusses the role of healthcare leaders in the quality improvement agenda. It also outlines the results of a

qualitative leadership study exploring leadership from an Australian allied health leader perspective that provides the context for the main study. This chapter highlights the clinical mandate for safe, high-quality care being a key responsibility of healthcare leaders.

Chapter 5 describes the theoretical underpinnings of the study in relation to practice development and leadership and provides an overview of the theoretical models underpinning the core elements of the SESLHD Allied Health Leadership Development Program. This chapter introduces the allied health leadership research framework that was used to design the leadership program. It also describes in detail the elements and structure of the SESLHD Allied Health Leadership Development Program.

Chapters 6 details the methodology and methods of the research and includes a description of the study design, subject selection, and methods of statistical analysis. This is further described below in 1.7. Chapter 7 discusses the results from the study. This chapter is arranged in several sections including participant profiles and program design; quantitative findings; qualitative findings; and an integrated overview of results. This chapter also describes the findings from the allied health leadership development program study for two cohorts of subjects, a 2014–2015 cohort with an intervention group and a matched control group and a 2015–2016 cohort with an unmatched intervention group.

Study findings are followed by a discussion chapter (Chapter 8), which expounds the significance of research findings for allied health. It also details the implications of findings for healthcare organisations and for the allied health professions more broadly. The thesis concludes with a chapter summarising the key findings from the study and makes recommendations for future research (Chapter 9).

1.7 Outline of the Methodology

The program of research described within the thesis outlines a mixed methods approach to evaluation. Using information from the two systematic reviews on practice development and allied health leadership, a framework for allied health leadership was developed. This framework was used to inform the design and development of the SESLHD Allied Health Leadership Development Program.

The Leadership Development Program was then implemented with two intervention group cohorts and evaluated using both quantitative and qualitative approaches. A randomised control trial approach to evaluation was used for the first cohort, thereby providing a robust method for program evaluation using quantitative program measures. Participant feedback was also collected as part of program evaluation and used to further expound research findings.

Prior to the implementation of the leadership program, a qualitative study was undertaken with allied health leaders. This aimed to provide collect information that would provide context to the primary study. Results obtained from this study was utilised in the synthesis and integration of study findings.

1.8 Conclusion

Allied health practitioners provide an essential role as part of the healthcare team, yet there is little known about allied health leadership or ways to assist them to become more person-centred and to flourish at work.

This research seeks to outline the current context of allied health leadership in NSW and to explore how allied health presently engages with the concepts of practice development. It describes how an allied health leadership program was developed, implemented and evaluated in relation to its effectiveness in developing the leadership skills and capability of allied health professionals. The study also describes the individual and healthcare outcomes arising from the program.

Chapter 2: An overview of practice development and allied health

2.1 Introduction and definition of practice development

Healthcare exists within a context of ongoing reform, modernisation and transformation (Chin, 2009; McCormack et al., 2013). However, implementing change within the healthcare system in order to improve the quality of patient care can be a complex, messy and daunting process (Chin, 2003; Rycroft-Malone, 2004). *Practice development* has been proposed as one approach to optimising processes of healthcare service improvement and emancipatory change leading to person-centred, evidence-based healthcare (Dewing, 2008b; Manley et al., 2008a).

The internationally agreed definition of practice development is as follows:

> 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).

At its heart, practice development focuses on person-centred care, 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. It is underpinned by values of respect for persons, individual right to self-determination, mutual respect and understanding. It is enabled by cultures of empowerment that foster continuous approaches to practice development. (McCormack & McCance, 2017a, p.3).

Practice development has been summarised as a mechanism for reflection about everyday practice, enabling those who actually deliver the care to make changes to facilitate better clinical outcomes and better quality and safe care (Chin & Hamer, 2006). Some suggest that 'the primary goal of practice development is to shift the focus of activity to the client' (Chin, 2003, p.425). Others report that person-centred cultures and human-flourishing are

essential elements of practice development (Yalden & McCormack, 2010; Dewing & McCormack, 2017; McCormack & McCance, 2017b).

This chapter provides an overview of practice development, including its evolution, principles, methods and application. It also provides a review of the literature about allied health's involvement with practice development within the healthcare setting.

2.2 Principles of practice development

There are nine core principles of practice development. These cover the practical, theoretical and philosophical elements of the approach (Manley et al., 2008a).

Principle 1: The objective of practice development is person-centred, evidenced-based care achieved by a workplace culture of effectiveness and human-flourishing.

Person-centredness is a standing or status that is bestowed upon one human being, by others, in the context of relationship and social being. It embodies recognition, respect and trust (Kitwood 1997, in Manley et al., 2008). The British Health Foundation states that person-centred care entails treating people with compassion, respect and dignity, as well as supporting them to recognise and develop their own strengths and abilities (de Silva, 2014). In practice development terms, person-centred care encompasses patients, their family and staff that are caring for, supporting or treating the patient (ARCHI, N.D.; Manley et al., 2008a).

Person-centred processes, systems and ways of working together are enabled by effective workplace cultures where individuals and teams are able to grow, develop and continuously learn (McCormack et al., 2013). Drennan (1991) defined culture as 'how things are done around here' (cited in Boomer & McCormack, 2010, p.636). The healthcare workplace culture is thus an important factor in the delivery of person-centred, clinically effective and continually improving clinical care (Manley et al., 2011a). Effective workplace cultures are said to enhance patient experience, clinical safety, staff commitment and effectiveness, adaptability, and productivity (Manley et al., 2011b).

In synthesising the literature, Manley and colleagues suggest cultural change occurs through leadership, teamwork, having the patient at the centre of care, and having flexible, innovative, safe and effective systems of continuous improvement in the changing

healthcare context (Manley et al., 2011a). Practice development is one way of involving people at all levels to create a culture where people are heard and feel they can make a difference (Lamont et al., 2009).

Inherent in the process of developing person-centred practice is the notion of flourishing. Human flourishing has been described as when an individual is in a state of well-being and at their best over time (Seligman, 2012). In the practice development literature, flourishing is seen as an outcome of person-centred cultures (Dewing & McCormack, 2017). It was originally defined by McCormack and Titchen in 2006 as *'maximising [through helping relationships] the potential for individuals to achieve his/her potential for growth and development'* (cited in McCormack & Titchen, 2014, p.1).

More recently, McCormack and Titchen have refined their definition of human flourishing, as follows:

> Human flourishing occurs when we bound and frame naturally co-existing energies, when we embrace the known and yet to be known, when we embody contrasts and when we achieve stillness and harmony. When we flourish we give and receive loving kindness. (McCormack & Titchen, 2014, p.19)

The concept of flourishing is connected with well-being, which involves positive emotions, engagement and absorption, and meaning through belonging and a sense of purpose (Seligman, 2012). A state of well-being can assist an individual to realise his/her own abilities, cope with life's stresses, work productively, improve health and contribute to the community (Wiseman et al., 2007). Employee well-being can assist in staff recruitment and retention and promote effective performance (Yu et al., 2008).

Principle 2: Practice development focuses on the micro-systems level but requires support from mezzo- and macro-system levels.

Focusing on the micro-systems level entails engaging people within settings where healthcare services are delivered, that is, at ward, department or clinic level. It is at this level that the delivery of care can be directly influenced and so can have the greatest impact (McCormack et al., 2013; Yalden & McCormack, 2010).

The assumptions that underpin this principle include:

- Staff who provide the care and services to patients and other users will best understand the barriers and enablers for change.
- There is a direct effect on user experience and outcome at this level.
- Involving and supporting the healthcare providers and their teams along with the users to lead the change will lead to a greater likelihood of the change being internalised and of embedding the change to be self-sustaining.
- Enabling practitioners to be person-centred and evidence-based in their approach will assist them to work more efficiently and in self-sustaining ways (Manley et al., 2008a).

While this principle also recognises the importance of the mezzo (hospital or service level) and macro (organisational level) systems in embedding change across the organisation (Manley et al., 2008a; Parlour & McCormack, 2012), having a micro (unit or team) system focus may be a different experience for an allied health practitioner, who may be more accustomed to the more familiar 'top-down' organisational clinical and quality governance approach experienced in the NSW public health system (Clinical Excellence Commission, ND; NSW Health, 2014).

Principle 3: Practice development integrates work-based, active learning in the workplace to lead to transformation of care.

Work-based learning entails learning in and from practice (Boomer & McCormack, 2008). It is a learner-centric approach achieved by a variety of processes, such as reflection, listening and questioning, and reportedly results in enhanced teamwork, collaboration and shared learning (Manley et al., 2009).

Learning is required for health professionals to advance their practice. Learning in and from practice through work-based learning and critical reflection is a key outcome of practice development (Clarke & Wilson, 2008; Manley et al., 2008a). Practice development therefore involves a range of processes to assist learning, including critical analysis, reflection and clinical supervision. These, and other formal and informal processes used to support learning in practice development, are called *active learning* (Manley et al., 2008a).

There are a number of fundamental tenets of active learning in practice development, including use of the senses and social intelligences in multiple ways (hearing, seeing, feeling and so on); critical self-dialogues in relation to experiences (past, present, future); critical discussions with others; being intentional in action; and facilitating or enabling others in this learning experience (Dewing, 2010).

Active learning thus creatively draws on a range of learning methods in order to facilitate in-depth learning (Dewing, 2010). These methods can be applied in diverse ways including to explore values and beliefs, build teamwork, and establish routines (McCormack et al., 2009a). The clinical skills of the practitioner are enhanced as a consequence, thereby improving patient care and facilitating transformational learning (Dewing, 2008b).

Principle 4: Practice development integrates evidence from practice and the use of evidence in practice.

The ability to critically evaluate research is essential to the development of an effective practitioner (Draper, 2006). Evidence-based practice is where the best research evidence is coupled with clinical expertise and patient preference to improve clinical care (Bradley, 2006). Practice development considers evidence-based practice should also encompass local context and environmental considerations (Bucknall, 2008).

Evidence-based practice as a research concept is well understood and applied by many allied health practitioners (Nehrenz, 2009). Although there is less emphasis on the use of evidence from practice within the allied health literature, in reality it occurs frequently (Grimmer-Somers & Kumar, 2009). Utilising a blended version of different knowledge types and forms of evidence in ways that suit the clinical context improves clinical and operational decision-making. It can also enhance the development of context-appropriate evidence (McCormack et al., 2011; ARCHI, N.D.).

Principle 5: Practice development integrates creativity with cognition so that mind, heart and soul blends, allowing thinking to be freed and to create opportunities for flourishing.

Creative approaches are used within practice development. In exploring the use of creativity within the practice development framework, Titchen and McCormack asserted

that creative thinking ('thinking about thinking' or metacognition (p.62)), imagination and creative expression, coupled with critical thinking (review of assumptions, contradictions and dilemmas and reflection in and on practice) create optimal conditions for human flourishing and allow individuals to achieve their maximum potential for growth (Titchen & McCormack, 2008).

Reflective and creative methodologies have been found to assist participants to disentangle conceptual complexities through the use of intuitive and experiential knowledge as part of the participatory process. This can be achieved by a number of means – for example, the use of metaphor, artistry, music and other creative methods (Yalden & McCormack, 2010).

Principle 6: Practice development is complex and its methodology is applied across teams. It involves all stakeholders, both internal and external.

Effective teamwork through collaboration, questioning, reflection and mechanisms of feedback is essential for ensuring the provision of safe and high-quality healthcare (Benson, 2010). Collaborative multidisciplinary teamwork is required to reach desired goals and maintain outcomes; however, team-based ways of working cannot be forced (Lamont et al., 2009).

The involvement of allied health practitioners in practice development activities as members of the multidisciplinary clinical team is discussed in detail later in this chapter.

Principle 7: Practice development seeks to operationalise and contextualise its program of work using key methods and principles.

There are a number of methods used in practice development. As outlined by Manley et al. (2008a) and McCormack et al. (2013), examples of practice development methods include:

a) *Clarifying values and workplace culture:* The process of values clarification within a unit, team or ward assists in defining collective values, goals and principles in order to facilitate change within that unit, team or ward (Lamont et al., 2009). Values clarification is a tool used in practice development for developing a shared vision and purpose. As values and beliefs influence behaviour, this task is considered the starting point for cultural change (Manley et al., 2013b).

b) *Claims, Concerns and Issues*: Through the process of critical questioning, a unit, team or ward can state favourable assertions (claims), unfavourable assertions (concerns) and other relevant items (issues) as relevant to the issue under consideration within their service. Similarly, barriers (which impede practice), enablers (which support practice) and actions (which develop and/or sustain practice) can assist with critical questioning and solution-focused action outcomes (Boomer & McCormack, 2008; Lamont et al., 2009).

c) *Agreed Ways of Working*: Agreed ways of working within the team can be developed utilising reflective processes. This entails the group making explicit how they will work together to reach an agreed goal (McCormack et al., 2013).

d) *High Challenge/High Support*: High Challenge is a process that aims to heighten awareness about a situation, including what is happening and the role of the person, leading to a reflexive mode of inquiry. To build a feeling of acceptance and safety, High Challenge is balanced with High Support to create an environment of personal safety while enabling the person to feel that they can act (Clarke & Wilson, 2008).

e) *Reflective practice and reflective learning*: Reflective practice is a self-regulatory process that facilitates an enhanced understanding of both the self and the situation with the intention that future actions can be informed by this understanding (Sandars, 2009). Reflective practice is a fundamental tool of practice development (Walsh et al., 2006).

f) *Observation of practice*: Observing things are they are, not as they are perceived, is a powerful enabler of learning and for building awareness of self, others and the context of care (McCormack et al., 2009b). Observation of practice is, therefore, an essential tool for practice development (McCormack et al., 2009b).

Other practice development techniques include working collaboratively; developing a shared vision; developing critical intent; participatory engagement; evaluation; and facilitating transition (Manley et al., 2008a; McCormack et al., 2013).

Along with key methods, this principle acknowledges the importance of context in the change process (Parlour & McCormack, 2012; Manley et al., 2011a; Rycroft-Malone, 2004). Allied health professionals represent a broad range of disciplines, each with its own

sub-culture and approach (Wagner et al., 2008). Being able to account for the unique allied health structures, resourcing, skills and cultures that exist across disciplines through contextualisation is, therefore, an advantage for allied health professionals using practice development.

Principle 8: Practice development is enabled by a set of processes including skilled facilitation that can be used as close to the interface of care as possible.

Facilitation has been described as 'a technique by which one person makes it easier for others' (Kitson et al., 1998, p.152) and is frequently referred to as a process of supporting people to learn. In practice development, the purposes of facilitation are to help and support people to achieve specific goals and to enable teams and individuals to analyse, reflect and change their attitudes, behaviours and ways of working (Dewar & Sharp, 2013; Harvey et al., 2002).

Skilled facilitation is an essential element of effective practice development and aims to assist individuals and teams through critical inquiry and reflection, high challenge in supportive environments and active learning, leading to transformation of individuals and their practice. This principle states that structured support and enablement is often most effective when it occurs as near to the clinical interface as possible (Manley et al., 2008a).

Principle 9: Inclusive, participatory and collaborative approaches to evaluation are utilised with practice development.

A participatory approach is important for facilitating an employees' acceptance of and commitment to a new initiative (Brabant et al., 2007). Evaluation of practice development's effectiveness will, therefore, require an evaluation that is inclusive, participatory and collaborative (Hardy et al., 2011). This is realised through shared decision-making and goal setting and through the provision of opportunities for all those affected by the work to actively participate in working towards shared goals (Lamont et al., 2009).

Inclusion and collaboration are essential concepts when considering the introduction of practice development to allied health professionals. Understanding how an allied health clinician relates as an individual, part of a discipline unit and as a member of the

multidisciplinary team can assist in determining strategies for enhancing uptake with practice development methods and philosophies. This is especially the case in NSW, where formal practice development programs are predominantly nurse- and midwife-led.

2.3 Evolution of practice development

2.3.1 The origins of practice development

Practice development is said to be an evolving entity (McCormack et al., 2013). It has its historical roots within the nursing and midwifery field and has been described 'as a movement in the development of nursing practice' (McCormack et al., 2013, p.3).

In her thesis on practice development, Osborne explained that the establishment of nursing as a 'discipline in its own right' occurred in the 1960s with foundational events such as the establishment of nursing-led in-patient units in the United States (Osborne, 2009, p.3). Pryor and Forbes cite Hall as a founder of therapeutic nursing practice, with her seminal work in 1966 focused on meeting the individual needs of patients through a skilled and capable nursing workforce. They note that Hall's work inspired others, such as Pearson, to follow (Pryor & Forbes, 2007).

The increased professionalism and therapeutics of nursing led to the establishment of Nursing Development Units (NDUs), with the first being established in the 1980s in the United Kingdom (UK) (Osborne, 2009; Pryor & Forbes, 2007). NDUs aimed to support nurses professionally and personally and served to strengthen the discipline of nursing. These units explored and evaluated new and emerging nursing roles and played a part in establishing nursing care standards and systems for quality improvement (Osborne, 2009).

NDUs evolved into Practice Development Units (PDUs), where the focus shifted to better outcomes for patients through development of the multidisciplinary team (Osborne, 2009). The first Australian PDUs in nursing were established by Greenwood in 1999 and FitzGerald in 2002 (Pryor & Forbes, 2007).

Practice development approaches became more widespread in the 1990s and evolved through the application of different approaches within nursing to enhancing patient care in various settings (McCormack et al., 2013). 'Practice development' as a term was used by British nurses, but inconsistently and using different methodologies (McCormack et al.,

2013). An early definition of practice development from McCormack and his team in 1999 was:

> [A] continuing process of improvement towards increased effectiveness in person-centred care, through the enabling of nurses and health care teams to transform the culture and context of care. It is enabled and supported by facilitators committed to a systematic, rigorous and continuous process of emancipatory change. (McCormack et al., 1999)

A concept analysis was undertaken by Garbett and McCormack in 2002 in an attempt to bring together the existing methodologies and approaches used to develop patient care and nursing practice. This led to the further evolution of the definition of practice development to include the elements of knowledge and skills leading to emancipatory change through the perspectives of service users (Garbett & McCormack, 2002).

The seminal text *Practice Development in Nursing* was published in 2004 (McCormack et al., 2004) and sought to bring visibility to the work undertaken in the field of practice development. 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 the emphasis it placed on emancipatory change (McCormack et al., 2013). Practice development focused on facilitating practitioners to answer questions about their practice that they generated and owned (McCormack et al., 2013; McCormack, 2010).

The 2004 text described two forms of practice development based on divergent approaches that reflected how practitioner learning happens, how change occurs and how knowledge is utilised and generated. These were *technical practice development* and *emancipatory practice development* (McCormack et al., 2004).

Technical practice development was defined as a 'top-down', management-driven approach that focused on knowledge, technical skills and outcomes (Manley & McCormack, 2003). Learning was said to occur essentially through competency-oriented training (Tolson et al., 2009). Emancipatory practice development was defined as a 'bottom-up', clinician-driven approach that focused on processes of reflection (Manley & McCormack, 2003). This approach was centred on culture, context and deductive and inductive knowledge (Tolson et al., 2009). In some instances, a blended approach to practice development was used (Tolson et al., 2009).

2.3.2 Contemporary practice development

Practice development has continued to evolve and its methodology has spread internationally to become 'an increasingly accepted global movement' (McCormack, 2010, p.189). In 2008, Manley, McCormack and Wilson edited the next text of updated thinking in practice development, *International Practice Development in Nursing and Healthcare*. This was followed by a second edition of *Practice Development in Nursing and Healthcare* in 2013, which is described by the editors as an updated version of the 2004 text reflecting the growing body of work undertaken in the field (McCormack et al., 2013).

In the practice development literature, the practice development continuum was further extended to include a third set of methods and principles – *transformational practice development* (McCormack & Titchen, 2006). This new approach has an inherent focus on human flourishing and is said to emphasise effective and person-centred healthcare cultures where people, not tasks and services, are the focus (Shaw, 2013).

A further refinement of the definition of practice development by Manley, McCormack and Wilson (2008) was described in section 2.1. This remains the accepted definition utilised in the contemporary practice development literature (see Boomer & McCormack, 2010; McCormack et al., 2013; Manley et al., 2011a; McCormack & McCance, 2017b).

2.4 Theoretical underpinnings of practice development

For many in the practice development field, Fay's critical social science provides the theoretical underpinnings of emancipatory practice development (Boomer & McCormack, 2010; Garbett & McCormack, 2002; Parlour & McCormack, 2012; Shaw, 2013; Unsworth, 2000; Fay, 1987). A detailed discussion of the theoretical underpinnings of practice development is provided in Chapter 5.

2.5 Application of practice development

2.5.1 Application to nursing and midwifery in Australia

As described, practice development has its roots in nursing practice and there is a plethora of published articles relating to the implementation and evaluation of practice development initiatives by nurses and midwives in Australia (for example, see Aitken & vonTreuer, 2014; Barnes et al., 2010; Beckett et al., 2013; FitzGerald & Solman, 2003). Through the

work of the NSW Nursing and Midwifery Office at the NSW Ministry of Health, practice development principles and approaches have been widely adopted by nurses and midwives in NSW. Each NSW LHD and SN receives dedicated funding for nursing positions to enable practice development-based programs to be undertaken, principally through the NSW *Essentials of Care* program (NSW Nursing and Midwifery Office, 2015).

Although there is widespread implementation of *Essentials of Care* and other practice development programs within NSW Health facilities (NSW Nursing and Midwifery Office, 2015), it was perceived that there was limited understanding of, and involvement with, practice development programs amongst allied health clinicians in the NSW public healthcare system, although this had not been quantified in the literature.

2.5.2 Practice development and allied health

In their monograph on change management strategies in practice development and nursing, Travaglia and her team recommended that the transferability of practice development methodology be explored with interprofessional teams and with other disciplines (Travaglia et al., 2011). This sentiment aligns with views from other authors such as Manley and colleagues, who described the need for a more widespread adoption of practice development, noting it was perceived as a nursing construct by non-nursing professionals. They also highlighted the challenge in achieving the multidisciplinary engagement of clinical professionals other than nurses and midwives in practice development approaches and the lack of multidisciplinary approaches reported in the practice development literature (Manley et al., 2008b).

While there is some evidence beginning to emerge of practice development being applied by other clinical disciplines such as medicine (Akhtar et al., 2016), in light of these findings, a review of the literature was undertaken to investigate the published literature pertaining to allied health and practice development.

2.6 Literature review: Practice development and allied health professions

A systematic literature review was undertaken with the aim of seeking published information about the use of practice development with allied health practitioners. This information was considered important for providing the context for the main study in relation to the Allied Health Leadership Development Program, which is underpinned by

the theory and methods of practice development. The review has been published in greater detail as a journal article[1] (see Appendix 8).

The following study question was generated to guide the review of the literature:

> Are practice development methods applied by allied health practitioners in healthcare settings?

For this review, the definition of allied health described in Chapter 1 was applied in relation to the allied health professional groupings that were included in the review.

2.6.1 Data sources and search strategy

A range of electronic databases were accessed in December 2014 and January 2015. The search utilised the SCOPUS, CINAHL (Cumulative Index to Nursing and Allied Health Literature) and Medline databases.

Key word searches for the search were as follows:

- practice development
- allied health (alternative word: health prof*)
- multidisciplinary (alternative word: team)
- healthcare (alternative words: health, service delivery).

These keywords 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.

All initial searches were by Article Title, Abstract, Keywords with combinations of the keywords using the 'AND' Boolean operator. Some searches were limited to the period 1990–present. A search by key author (McCormack, Manley, Titchen and Dewing) was also undertaken. These four authors were chosen due the breadth of their publications in relation to practice development.

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[1] 'Practice development and allied health – a review of the literature' (2017), *International Practice Development Journal*, 7(2)[7], 1-25; https://doi.org/10.19043/ipdj.72.007

Due to its status as the primary international practice development publication, a separate manual search using the term 'allied health' was undertaken in the International Practice Development Journal (IPDJ). Since it is the most probable place for practice development publications, a targeted allied health discipline-specific search was also undertaken. Searches using individual allied health professional groups included physiotherapy, occupational therapy, dietetics, speech pathology, podiatry, pharmacy, psychology and social work. 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 Commission, 2006; SESLHD, 2017).

References were initially screened by title. Where further clarity or information was required, the abstract of the article was reviewed. The abstracts of all articles 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.

All references were downloaded in EndnoteX7™, which is a reference management software package (endnote.com). This was to enable later analysis and identification of duplicated articles.

2.6.2 Search process

Using the search terms described above, Table 2.1 outlines the references that were identified. Due to the high numbers of articles using the term 'practice development' alone, the articles identified through the refined search term health prof* or 'allied health' and the other key search terms were used to generate the initial review. These were scanned by title, author and/or abstract to initially determine relevance to the study question over three separate searches.

Of the articles identified through the database and journal searches, 43 duplicates were identified and removed. All of 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 and were thus also excluded from the final count. The search process and

yield are summarised in the PRISMA diagram (Moher et al., 2009) in Figure 2.1. Total selected articles are listed in Table 2.2.

Table 2.1 Numbers of identified references

SEARCH TERM	SCOPUS	CINAHL	MEDLINE	IPDJ	TOTAL
"practice development"	1029 *(English only, excluding engineering and computer science articles)*	962	638	NA	2629
AND					
Health prof* OR "allied health"	696 *(English only)*	480	414	82	1672
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	
- Social worker				28	

Table 2.2 Total selected articles

	SCOPUS	CINAHL	MEDLINE	IPDJ	TOTAL
Total selected for full article review	72	160	99	82	413
Shortlisted articles	16	30	4	5	55
Number selected	5	7	1	2	15

2.6.3 Study selection (inclusion and exclusion criteria)

Papers were included in the review if they:

- referred to or listed allied health practitioners as core study participants, including those involved as part of a multidisciplinary team study;
- described methods, processes or theories associated with transactional, emancipatory or transformational practice development;
- contained clear references to healthcare or clinical service delivery; and
- were published in English and freely retrievable.

Papers were excluded from the review if they:

- did not refer to allied health practitioners or allied health participants in a multidisciplinary team as core study participants;
- did not refer to transactional, emancipatory or transformational practice development;
- did not pertain to clinical or healthcare services; or
- were published in a language other than English.

The inclusion criteria initially included that selected papers must be published in a peer-review journal. This criterion was removed because a key journal, *Practice Development in Health Care*, a discontinued but relevant journal for this topic, is not currently verified as peer-reviewed.

2.6.4 Quality assessment

2.6.4.1 Literature review framework

A literature review framework was developed to assist the planning and organisation of the literature review. Three sources of information were used to inform this framework: Cooper's (1988) *Taxonomy of Literature Reviews* (cited in Randolph, 2009), Boote and Beile (2005) *Literature Review Scoring Rubric*, and Davies (2006) *Purposes of a Literature Review*. The framework illustrated in Figure 2.2 aims to facilitate a systematic approach to the literature review and includes analysis and synthesis, identification of key themes; implications, and future directions.

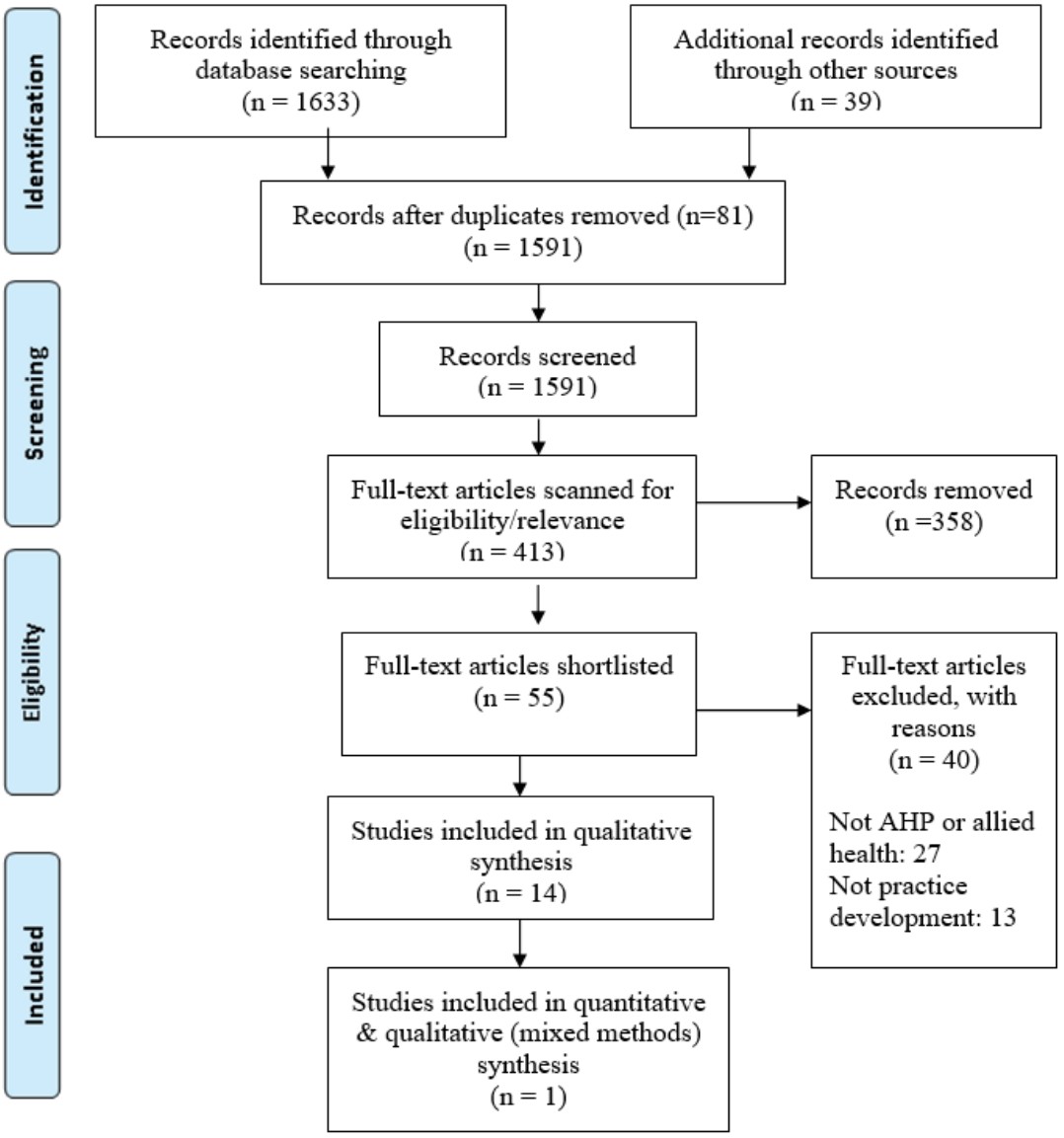

Figure 2.1 Prisma summary of search results – practice development and allied health (adapted from Moher et al., 2009)

Figure 2.2 Literature review framework

2.6.4.2 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 & Solomon, 2009). There are a range of tools available for clinicians seeking to ascertain the rigour and appropriateness of research papers (Smith, 2009).

Rigour for this review was ascertained in two ways. The qualitative papers were assessed using the Clinical Appraisals Skills Program (CASP) worksheet *10 questions to help you make sense of qualitative research* (Critical Appraisal Skills Programme, 2010) and then supplemented by the *Ten questions to ask when critically appraising a research article* by Young and Solomon (2009).

2.6.5 Results: Yield

A total of 1672 citations were scanned over 14 database searches and 15 searches of the IPDJ. Of these, 43 duplicates were identified and removed. A total of 413 papers were obtained as full text. These were scanned for relevance and against the eligibility criteria, 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 & Kumar, 2009).

Of the articles excluded, the majority did not sufficiently relate to allied health services or allied health practitioners 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 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). It was found that the term 'practice development' was similarly utilised in some allied health specific papers (n=3) to refer to the development of practice within a defined setting. These papers were also excluded as they did not align with the principles of technical, emancipatory or transformational practice development. In total, seven articles were excluded based on the definitional differences.

The primary text books *International Practice Development in Nursing and Healthcare* (Manley et al., 2008a) and *Practice Development in Nursing and Healthcare Second Edition* (McCormack et al., 2013) were also reviewed as part of the literature search. A study described in one chapter in the 2013 text met the selection criteria.

A scan of the literature identified that there are a number of Foundation of Nursing Studies (FoNS) published 'Improvement Insights' and 'Dissemination Series' papers involving allied health practitioners. While some articles reported inclusion of allied health practitioners in projects and initiatives, these documents were excluded from the review as these online FoNS series are not published in a recognised academic journal.

2.6.6 Selected studies

A total of 15 articles and one book chapter met the stated selection criteria and made specific reference to allied health professions or listed allied health as part of the multidisciplinary team. A detailed description and critical analysis of these papers is provided in Appendix 1, as well as in the published journal article in Appendix 8.

In considering the highest level of primary evidence, all but one studies were qualitative. One study utilised a mixed methods approach (quantitative and qualitative). There were no quantitative studies or systematic reviews of the literature. Two of the articles were reflective papers and one was a chapter in a practice development text book. All of the articles were descriptive studies. It is noted that three of the 15 selected journal articles (20%) were not peer reviewed (see Appendix 1).

2.6.7 Analysis and synthesis

The goal of the literature review was to determine whether allied health involvement in practice development activities has been reported in the practice development literature. The characteristics of the studies and the nature of allied health involvement with practice development will now be discussed.

2.6.7.1 Overview of the included studies

The earliest journal article was published in 1998 and the most recent in 2014. While there was a spread of publications across the 1998 to 2014 timespan, the majority (73%; n=11) were published between 2011 and 2014.

The practice setting for each of the selected studies included mental health (n=5), aged care (n=1), palliative care (n=1), acute care (n=5), rehabilitation (n=1), and re-ablement (n=1). Two studies involved multiple sites. The practice settings for each of the selected studies are outlined in Table 2.3.

2.6.7.2 Conceptual Frameworks in the Literature

The conceptual framework in the selected articles appeared to reflect the origins of practice development in critical social science (enlightenment, empowerment and emancipation). This was not made explicit in any of the selected articles but can be inferred from their content. Conditions for change described in the papers included the improvement of clinical service provision, the requirement to meet external accreditation standards and to better manage change within the complex health system.

Table 2.3 Practice setting for each of the studies

CONTEXT	AUTHORS
Mental Health services	Andvig & Biong, 2014
	Chambers, Gillard, Turner & Borschmann, 2013
	Kemp, Merchant & Todd, 2011 (multiple sites)
	Lamont, Walker & Brunero, 2009
	Sin, Moone & Wellman, 2003
Aged Care services	Elliot & Adams, 2012
Palliative Care service	Cambron & Cain, 2004
Acute Care services	Andersen, 2012
	Bates, 2000 (orthopaedics)
	Devenny & Duffy, 2014
	Walsh & Walsh, 1998 (surgical)
	Manley, Parlour & Yalden, 2013 (acute stroke unit) [book chapter]
Rehabilitation service	Covill & Hope, 2012
Re-ablement unit	Hunnisett, 2011
Multiple sites	Bray, Brown, Prescott & Moen, 2009
	Shaw, 2012

2.6.7.3 Key themes

As part of analysis and synthesis of the literature, the themes and key concepts arising from the literature should be identified (Boote & Beile, 2005; Cooper 1988, cited in Randolph, 2009). Review of the studies identified four areas of primary focus:

1. Enhanced multidisciplinary team work.
2. Practice development framework and principles.
3. Practice development education and learning programs.
4. Clinical quality improvement and service delivery outcomes.

2.6.8 Thematic analysis

While a detailed thematic analysis of the 15 journal papers and one book chapter based on Davies (2006) theme matrix for a literature review methodology can be found in Appendix 1, a summarised critical appraisal of the articles and chapter follows. To highlight the consistency of findings across papers, the articles have been organised in their key themes. It is noted that most papers addressed more than one theme. The identified themes shall be discussed in turn.

Theme 1: Enhanced multidisciplinary team work

The majority of papers (n=9) involving allied health personnel addressed the importance of team-based approaches or multidisciplinary team work. Several papers specifically related to team approaches in relation to Practice Development Units (PDUs).

PDUs are accredited units that aim to innovate and improve practice in order to enhance the quality of patient care (Bates, 2000). PDU status requires a ward/service to meet a set of specific standards, one of which entails multidisciplinary team involvement in practice development initiatives. Four of the selected papers described how individual units involved allied health as part of forming and/or accrediting a PDU (see Bates, 2000; Bray et al., 2009; Walsh & Walsh, 1998; Covill & Hope, 2012).

The use of practice development as an explicit way to enhance multidisciplinary mental health team work was also reported. A four-stage participatory action research study, co-authored by a clinical psychologist in an inpatient mental health unit, described the inclusion of allied health practitioners in the exploration and critique of issues relating to workplace culture (Lamont et al., 2009). A second study in the same specialty noted that occupational therapists were important contributors to their local practice development program and outlined the significance of their involvement (Kemp et al., 2011).

A shared multidisciplinary leadership model was also identified within a palliative care service in the United States (Cambron & Cain, 2004). In this study, the practice development process involved nurses as well as social workers, chaplains and nursing assistants.

Two of the authors were allied health practitioners who described their own personal reflections and clinical perspectives as physiotherapists working in multidisciplinary teams (Hunnisett, 2011; Andersen, 2012). One author described her journey as a facilitator with

her team and in the multidisciplinary work environment (Hunnisett, 2011). Another author discussed the ways in which practice development improved communication and language within a healthcare team to improve patient care (Andersen, 2012). While not research articles, these two papers illustrated the specific application of practice development approaches by two allied health clinicians within their clinical environment.

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

The excerpt from a published book chapter written by Manley et al. (2013a) described three practice development projects, one of which involved the development of a multidisciplinary dysphagia (swallowing) screening tool for use in an acute stroke unit in an Australian public hospital. This project was part of a three-year action research study (unpublished) involving nurses, allied health professionals and university researchers utilising action research cycles based on analysis of triggers and agreed strategies (Yalden 2005, cited in Manley et al., 2013a).

The chapter outlined key aspects of formulating action hypotheses, with purpose, context, outcomes and impacts as well as evidence being outlined in relation to the dysphagia project (Manley et al., 2013a). The information described in the chapter formed part of an overall discussion on the use of action hypotheses. The details of the actual dysphagia project were limited, therefore there was no information pertaining to the level of allied health involvement and which disciplines were engaged with the study.

Theme 2: Practice development framework and principles

a) Practice development framework

Several of the research papers referenced the use of practice development as a framework, notably as part of their unit's journeys to becoming accredited PDUs (Bray et al., 2009; Bates, 2000; Covill & Hope, 2012).

One research paper explored the impact of practice development approaches on healthcare practitioners, using the experiences and approaches of two practice development team projects to illustrate differences in the broad application of practice development across the National Health Service (NHS) in the UK (Shaw, 2012). Results formed 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 outlined previously, there are nine core principles of practice development (Manley et al., 2008a). Nine of the articles reviewed (60%) described one or more of the nine practice development principles.

Principle 1 – Enhanced person-centred care

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

In one article, Devenny and Duffy (2014) described a framework for person-centred reflective practice used in Scotland. This framework was based on, firstly, the tenets of clinical pastoral education used by clinical spiritual care specialists or chaplains and, secondly, the person-centred nursing framework developed by McCormack and McCance in 2010 (McCormack & McCance, 2017). The framework was developed using a modular program involving nurses, a physiotherapist and a physiotherapy assistant from the intermediate stroke care team (Devenny & Duffy, 2014). The remaining three articles have been described under *Theme 1*.

Principles 2–9

Brief descriptors of how the other practice development principles (2–9) are referenced in the selected papers are provided below.

- The microsystem as change agent *(principle 2)*, where improvement of care is determined by the staff providing that care, was highlighted by Covill and Hope

(2012) and Lamont et al. (2009). This reflects the focus of this principle on change being at the level at which care is delivered.

- Work-based learning approaches and change *(principles 3 and 4)* are described by Lamont et al. (2009) and Cambron and Cain (2004). These papers reflected how active learning was applied in the workplace.

- The blending of creativity with cognition *(principle 5)* was expressed by Lamont et al. (2009) in their local program within a mental health unit, where creative means were utilised to facilitate learning and new ways of thinking.

- Bray et al. (2009) and Covill and Hope (2012) introduced practice development as embracing a multi-professional approach and philosophy that encourages interprofessional networking and cross-boundary working *(principle 6).* Bray et al. (2009) cited Unsworth (2000) that multidisciplinary team working is a key criterion of successful practice development units. Cambron and Cain (2004) highlighted the involvement of the multidisciplinary team, as did Kemp et al. (2011) and Walsh and Walsh (1998).

- *Principles 7* and *8*, of practice development being enabled by a set of methods and processes as close to the interface of care as possible, was seen in the papers by Lamont et al. (2009) and Cambron and Cain (2004), who clearly described the use of practice development methods.

- Inclusive, participatory and collaborative approaches to evaluation *(principle 9)* were outlined in detail in the chapter by Manley et al. (2013). This principle is also seen in the paper by Shaw (2012).

Theme 3: Practice development education and learning programs

Three papers described multidisciplinary learning approaches using practice development. Although these papers described programs in the context of a mental health setting, learnings from these programs may be suitable for other clinical settings.

One study reported on a multidisciplinary learning program for staff caring for older people in the mental health aged care sector. The team included psychologists, nurses, an

occupational therapist, speech and language therapists, a pharmacist and an administrator (Elliot & Adams, 2012).

Another study described 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 and the topics they covered included the locally developed *Interventions for Psychosis* program, clinical supervision and family/carer centred practice (Sin et al., 2003).

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

Theme 4: Clinical quality improvement and service delivery outcomes

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

One paper explored how conversations were used as tools in person-centred recovery within a therapeutic mental health setting (Andvig & Biong, 2014). Using qualitative analysis from focus groups, the authors described the prerequisites for conversation, the focus of conversation and the views of conversational topics by health professionals (n=15), including allied health clinicians. Results from this study illustrated team diversity in opinion and approach in relation to the use of recovery-oriented conversations.

Another study reported 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 programs. Star Wards aimed to enhance ‘therapeutic provision and engagement’ (Kemp et al., 2011, p.20) in order to

improve the experience and treatment outcomes for service users. The Productive Ward aimed to improve safety, efficiency and reliability of nursing care by facilitating more time for direct patient care. In the study, occupational therapists were involved in the Star Wards program (Kemp et al., 2011).

The authors 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 client contact, were reported. However, substantiating evidence in relation to baseline and post-program figures per ward/hospital was not offered. The characteristics of the people surveyed were also not provided.

Two other articles reviewed involved service delivery. These, however, were of a small scale and short-term nature. One article described service delivery outcomes in relation to falls (Covill & Hope, 2012) and another study described the introduction of unit-based improvements, including a multidisciplinary orientation manual, a weekly case presentation forum, enhanced consumer program timetabling and the use of suggestion boxes (Lamont et al., 2009). Specific details of patient, staff or service outcomes were not reported in either study.

2.6.9 Quality review

As has been described, findings from a number of the 15 papers were of limited applicability due to reduced research rigour, including a lack of detail about participants, outcomes, reflexivity and selected measures (Critical Appraisal Skills Programme, 2010). Three papers (20%) were not published in a peer-reviewed journal.

Six articles (40%) were rated as low quality, three as medium quality (20%), and three as high quality (20%). Lower quality articles did not report substantiated staff or service outcomes and papers overall also lacked specificity in terms of ethics and methods for evaluation (Critical Appraisal Skills Programme, 2010). Rigour was not able to be assessed in the remaining three papers (20%).

2.7 Discussion

The articles that were selected as part of this review were predominantly of a reduced academic standard. This limited their level of rigour and hence their applicability. However,

there are trends and observations that can be made in the context of the practice development literature overall.

The literature review has illustrated that allied health involvement in practice development is reported to be important for effective teamwork, shared governance and learning, and for effective leadership in producing healthcare system improvement and change at the micro and macro levels. The published research indicates that PDU accreditation criteria have to date been a primary driver for allied health involvement with practice development initiatives in the published literature. Mental health settings were featured most in the studies involving allied health clinicians (n=5; 33%).

Despite the growing body of literature pertaining to practice development (McCormack, 2010), there is a small number of projects and studies involving allied health practitioners. Synthesis of the literature showed that a relatively few authors have published research inclusive of allied health involvement with practice development. The literature review identified only two reflective commentaries authored by allied health clinicians and one research paper co-authored by an allied health practitioner.

Peer-reviewed research studies specific to allied health professionals and allied health practice were not able to be identified and, in a number of the selected articles, the reference to allied health was limited. 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 & McCance, 2017b).

2.7.1 Literature review: Implications for allied health and future directions

There are a number of implications for allied health practitioners arising from the literature review. With increasing research demonstrating the effectiveness of practice development (McCormack et al., 2013), allied health professionals should be encouraged to engage with and apply practice development methods within the context of their clinical practice. This may require specific action to foster interest and demonstrate relevance of practice development to allied health personnel. Attention to creating a shared narrative relating to person-centred care and practice development may also be needed.

Furthermore, it is evident that the inclusion of allied health personnel as part of practice development initiatives, and of the practice development agenda more generally, is a key

issue. Noting the stated intent of practice development evaluation is to be inclusive, participatory and collaborative (Manley et al., 2008a), there needs to be a structured and systematic approach to engage and include allied health practitioners in the practice development agenda.

Inclusion is defined as 'the act of including' (Merriam-WebsterDictionary, N.D.) and has been described as where there is a sense of belonging, respect and being valued, and where there is supportive energy and a commitment from others in order for one to do their best work. An inclusive process engages each individual and values their role in the success of the outcome. In this way, individuals feel more appreciated and function optimally (Miller & Katz, 2002).

People connect with others in specific social identity groups when there are similarities. However, one does not necessarily identity with each group that they belong to (Miller & Katz, 2002). For example, an allied health professional may be an active clinical member of a ward-based team including medical and nursing staff, yet feel more connected to their discipline-specific colleagues within their allied health department. Understanding how an allied health clinician relates as an individual, as part of a discipline unit and as a member of the multidisciplinary team, can assist in determining strategies for enhancing inclusion, and therefore uptake with practice development methods and philosophies.

Effective communication of ideas is critical to the success of the healthcare system. Being able to successfully communicate ideas to individuals with differing roles, abilities and priorities across the healthcare spectrum will enhance overall healthcare effectiveness (Schwartz et al., 2010). Hoogwerf and colleagues note 'multiple discourses of practice development' (p.50) leading to a number of issues for practice development teams.

- Knowledge and understanding of practice development may be variable in a team. Effort is required to ensure local discourse is understood by all stakeholders.

- Different healthcare practitioners can learn each other's language and develop insight by engaging in the process of action learning, including reflection. The process of action learning thus becomes the discourse.

- The success of a practice development project is contingent on the effective discourse between various stakeholders irrespective of their place in the hierarchy of the organisation. (Hoogwerf et al., 2008)

This suggests that the development of a common language in relation to the issue being addressed is required. Thus, consistent with the practice development principle of an interprofessional approach (Manley et al., 2008a), practice development-related discourse can assist with deepening the understanding, insights and consensus between different disciplines and stakeholders, each come with their own cultures, knowledge-base and professional language (Hoogwerf et al., 2008). To achieve this would require space and time, as well as a safe environment with an openness of discourse, for practice to change (Walsh et al., 2009). These are important factors to consider in relation to allied health involvement with practice development.

Practice development requires a level of self-awareness and commitment that can be built when a culture of curiosity, questioning and mindfulness is encouraged (Hamer and Page, 2009). Intentionally using these approaches and techniques with allied health professionals would assist the team to develop inclusive, participatory and collaborative solutions (Manley et al., 2008a).

There is, as McCormack states, the potential for multiple perspectives to further develop the future for practice development in an integrated and transformative way (McCormack, 2010), including opportunities for existing practice development activities and research initiatives to expand and grow allied health involvement. This would necessitate stronger systems to engage and support allied health professionals. The shared ambition for optimal patient care could help to address this by providing a common platform from which to facilitate inclusion of allied health and other team members in practice development initiatives (Nehrenz, 2009).

Although the focus in this chapter has been on allied health professionals, support from nursing and midwifery colleagues by way of sharing their practice development knowledge, practical experience and wisdom would be a significant factor underpinning the success of a wider practice development roll-out in the healthcare system. Their

extensive experience with practice development would be invaluable for other healthcare professionals engaging with practice development.

Finally, 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 in a similar fashion to the way practice development in nursing and midwifery is supported by Nurse Managers and Directors of Nursing.

2.8 Limitations

There were several limitations to the review. A number of the papers described the process of being accredited as PDUs, which, in NSW, are currently called other by other titles, such as Clinical Development Units or Nursing Research and Education Units. These local units and teams are typically nurse-led and operate with no formal links to allied health services. Also, they are typically not accredited units.

Another factor for consideration is the evolving nature of the practice development literature (McCormack, 2010), which means some of the views expressed in earlier papers, from the 1990s and early 2000s, have now been superseded by new information, evolved theoretical frameworks and fresh evidence.

Lastly, it is acknowledged that the definition of allied health varies across jurisdictions and countries (Pickstone et al., 2008; Mak et al., 2016). Therefore, using the NSW definition of allied health may have influenced the findings in the review.

2.9 Conclusion

Practice development is a complex approach to healthcare improvement that focuses on emancipatory change at the level at which care is provided, leading to person-centred, evidence-based healthcare (Manley et al., 2008a; McCormack et al., 2013). With its origins in the development of nursing practice, the practice development literature to date has been principally nursing-focused (Manley et al., 2008a). In the NSW public health system, practice development is a widely accepted approach to healthcare improvement by nursing and midwifery, yet it appeared to have limited specific application by allied health professionals.

A review of the literature showed that there is a limited number of practice development published reports involving allied health practitioners. Published research studies specific to allied health professionals or to allied health practice were not able to be identified at the time of the review.

In order to enhance allied health and overall team engagement, flourishing and high standards of clinical care (Clarke & Wilson, 2008; Manley et al., 2008a; Manley et al., 2011a), there are opportunities for current practice development activities across health systems to expand to become more inclusive of allied health clinicians. 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 allied health professionals are required. Further practice development research involving allied health professionals is also needed.

Chapter 3: Leaders and leadership in allied health

3.1 Introduction

It is well known that the provision of healthcare services is complex and needs ongoing, adaptive change (Scott, 2010; Heifetz & Laurie, 2001; Chin & Totterdell, 2009). In the healthcare setting, it is considered necessary to have strong clinical leadership at all levels for improved delivery and quality of healthcare services (Nicol, 2012; West et al., 2015; Martin et al., 2012), better staff engagement (Brand et al., 2012) and more effective leadership outcomes (Wylie & Gallagher, 2009; Snodgrass et al., 2008; Martin et al., 2012). Effective leaders within healthcare services are therefore essential (Catford, 1997; Kumar, 2013).

To prepare for the future, healthcare organisations must develop agile, competent leaders. Competencies for healthcare leaders include both technical and industry capabilities as well as analytical, interpersonal and communication skills. Leaders also need to be emotionally intelligence and adaptable (Nicol, 2012). These requirements, along with the need to foster a productive, efficient workforce that is adaptable to change, has led to extensive research both on leadership styles and leadership outcomes within healthcare entities (West et al., 2015; Cowden et al., 2011; Martin et al., 2012; Casida & Parker, 2011; Wright et al., 2000; Health Workforce Australia, 2012; Block & Manning, 2007).

The *Mid Staffordshire National Health Service Foundation Trust Public Inquiry* in England illustrated serious and significant failings in the delivery of safe and quality healthcare (Francis, 2013). Following this inquiry, some called for a 'changing of the leadership concept' within healthcare (Ham & Hartley, 2013, p.29). This renewed leadership would see leadership that was adaptive and distributed, with leadership development focused on developing an individual so that there was improved team, organisational and/or system performance (Ham & Hartley, 2013). It would also see leadership practices redefined to promote the development and spread of improvement and innovation in order to improve patient outcomes, safety, effectiveness and efficiency of healthcare (Scott, 2010). This call for renewed leadership highlights how important effective leadership is for safe, quality healthcare.

This chapter provides an overview of leadership theory and explores the relevance of effective leadership to the healthcare agenda. It also outlines a review of the literature about allied health and leadership that provides information about published research in this area.

3.1.1 Definitions of leadership

Starting with Bennis in 1959, leadership has been seen as a 'slippery and complex' construct with a 'an endless proliferation of terms' used to describe it (Bennis, 1959, p.260). Various definitions and many theories of leadership can be found in the literature.

An early definition of leadership by Bennis involved three major elements:

> a) an agent who is typically called a *leader;* (b) a process of induction or the ability to manipulate rewards that here will be termed *power*; and (c) the induced behaviour, which can be referred to here as *influence.* (Bennis, 1959, p.296; emphasis in original).

Over time, Bennis's definition of leadership has been refined. Kouzes and Posner, for instance, described leadership as being about relationships, credibility to others and actions. They asserted that leadership is everyone's business (Kouzes & Posner, 2007). Senge saw leadership as an art rather than as a position of authority or a person with certain personality traits. He believed leadership needed to be apparent at every level of a program, not merely at the top (Senge, 1992). These are two perspectives that reflect the significant shift from the early definitions of the heroic leader.

Others, however, felt defining leadership was not clear-cut. Day and Harrison struggled with defining leadership, arguing that there was no simple definition. They suggested, however, that it often involved setting direction and supporting others (followers) as well as bringing the team together to collectively set direction, build will and create alignment (Day & Harrison, 2007).

Kutz defined leadership as 'the ability to ethically influence others, regardless of title or role, toward the accomplishment of goals and objectives' and required a person to apply and integrate competencies specific to leadership (Kutz, 2010, p.265). According to Stanley, leadership could be seen as 'unifying people around values and then constructing the social

world for others around those values and helping people to get through change' (Stanley, 2009, p.146). Both are considered helpful definitions, reflecting influence, outcomes, competencies and the importance of professional values.

Garman and colleagues summarised leadership in healthcare as being able to cultivate an environment where all employees could contribute to their maximum potential in support of the mission of the organisation. They described the three central aspects of effective healthcare leadership as having a compelling vision, energising goals and a positive organisational climate (Garman et al., 2006).

3.1.2 Leadership approaches

A number of leadership theories have been described, including the following classical approaches.

i) *Great Man Theory*, where leaders are born (not made) and have personal leadership attributes.

ii) *Trait Theory*, which sees leadership as a set of traits inherent in a person.

iii) *Behavioural /Functional Approach*, which looks at the tasks and behaviours of a leader.

iv) *Contingency Models*, which consider the situation as an influential factor in leadership.

v) *Leadership Styles*, such as transactional and transformational leadership (Kumar, 2013; Taylor, 2009; Doyle & Smith, 2009).

More recently, a more holistic view has emerged, with more positive forms of leadership being reported. A review of current leadership trends and future directions undertaken by Avolio and colleagues noted the expansion of leadership characteristics beyond individual traits to encompass leadership models that were 'dyadic, shared, relational, strategic, global, and a complex social dynamic' (Avolio et al., 2009, p.423). Additional new-genre leadership, shared/collective leadership, and complexity leadership theories have emerged that include authentic leadership (open, transparent leadership that engages followers), cognitive leadership (leadership with a focus on thinking and information processes of

leaders and followers), and cross-cultural leadership (which explores leadership in a multicultural context) (Avolio et al., 2009).

Adaptive leadership is another form of leadership reported in the literature (Heifetz et al., 2009; Heifetz & Laurie, 2001). This leadership is defined as 'the practice of mobilizing people to tackle tough challenges and thrive' and is said to be a practice that any person can pursue regardless of their place in an organisation (Heifetz et al., 2009, p.14). Within healthcare, there have been some studies that make reference to adaptive leadership (for instance, Doody & Doody, 2012) and adaptive leadership is also the theoretical model used in the HETI NSW Health Leadership Program (HETI, 2017).

One leadership theory cited widely in the literature is the *full range leadership theory*, which proposes three types of leadership behaviour (transformational, transactional and laissez-faire leadership) represented by nine leadership factors (Bass & Avolio, 2004). Transformational leadership theory has reportedly found support in care-related (such as healthcare) and teaching fields, due to its focus and ideology (Stanley, 2008). It also has applicability to allied health (Ellison et al., 2013; Richardson, 2011).

A more in-depth discussion of the full range leadership theory is provided in Chapter 5, but a summary of the elements of the theory (transactional leadership, transformational leadership and laissez-faire leadership) follows.

a) Transactional Leadership: In transactional leadership, relationships among allied health clinicians are based on an exchange of some resource valuable to them. The interaction between the allied health professional and administrators is usually short, episodic and limited to exchange transaction (Miller & Gallicchio, 2007).

Transactional leadership factors are *management by exception* (active and passive), where there are criteria for compliance and deviations are monitored, and *contingent reward*, where a leader provides a reward when an agreed task is completed (Firestone, 2010; Snodgrass et al., 2008).

b) Transformational Leadership: Transformational leaders are said to possess a range of characteristics and behaviours that include being visionary, inspirational and able to empower others in order to bring about greater influence, motivation and intellectual

stimulation of followers (Snodgrass et al., 2008; Firestone, 2010; Wilson et al., 2013). More complex and effective than transactional leadership, transformational leadership occurs when one or more allied health professionals relate and engage with each other in an environment of collaboration. Here, the clinician and their leader lift one another to greater levels of commitment, dedication, productivity and motivation within this collaborative environment. In this process, the motives of the leader and the follower transform to become identical (Miller & Gallicchio, 2007).

Transformational leadership factors include *idealised influence* (attributes and behaviours) where the leader is admired, respected and trusted, *inspirational motivation*, where meaning and challenge is provided by the leader, *intellectual stimulation*, where new ideas and creative solutions are promoted, and *individual consideration*, where the leader may act as a coach or mentor (Firestone, 2010; Snodgrass et al., 2008).

Transformational leadership seeks to influence followers to transcend the interest of self for that of the greater good of the team, organisation or society (Bass et al., 1996). In the clinical setting, transformational leadership has been associated with facilitating person-centred, quality healthcare (Wilson et al., 2013; Cummings et al., 2010).

c) Laissez-faire: Laissez-faire leaders are said to avoid making decisions and take no leadership responsibility (Firestone, 2010; Snodgrass et al., 2008).

3.2 Leadership in healthcare

It is reported that transformational and transactional leadership leads to greater effort from individuals and enhanced effectiveness of work units, with some studies finding a blend of both transactional and transformation leadership styles was linked with better outcomes and provided effective, positive forms of leadership, depending on context (Snodgrass et al., 2008; Firestone, 2010). Some purport that the most effective allied health leaders perform a full range of leadership styles that demonstrate all the transformational leadership traits augmented by transactional contingent reward approaches to leadership (Snodgrass et al., 2008).

A range of leadership benefits has been reported in the health literature. These include enhanced motivation and effectiveness of subordinates, better alignment, and more

effective interaction with external contexts. Enhanced clinical teamwork, improved quality and safety, and greater innovation are also reported to arise from effective leadership (Berwick, 2003; West et al., 2015; West et al., 2003). Leadership clarity within healthcare teams is reportedly associated with clearer team objectives, better support for innovation, higher participation and a greater commitment to excellence (West et al., 2003; West et al., 2015). Conversely, weak leadership can result in a decreased quality of life for all involved (Kutz, 2010).

Excessive staff turnover can be both ineffective and costly to the healthcare system (Bender, 2005). Leadership is said to be an important factor in attracting and retaining allied health professionals, with poor leadership and management one factor associated with health professionals leaving either their position or their profession (Schoo et al., 2005; Stagnitti et al., 2006; Cowden et al., 2011). Linked with this is the need for more careful succession planning to transition younger employees into leadership positions, including a requirement for more structured learning and development (Podger, 2004).

3.3 Leadership Development Programs

Leadership development programs are educational programs aimed at enhancing the leadership capabilities of an individual in order to improve both job performance and managerial skills (McAlearney, 2008). Many organisations have implemented leadership development programs in order to facilitate the growth of personnel and to assist potential leaders develop the relevant skills and gain the necessary experiences for future leadership roles (Bamberg & Layman, 2004).

Within the healthcare context, a number of published studies have reported positive outcomes for individual nursing leaders following leadership development programs (for example, see Cowden et al., 2011; Martin et al., 2010; Boomer & McCormack, 2010; Wilson et al., 2013; Miskelly & Duncan, 2014). Woltring and colleagues found that leadership programs resulted in a measurable positive impact on leadership effectiveness and accomplishments (Woltring et al., 2003). Some see leadership development as essential to long term growth and sustainability of the healthcare management profession (Garman et al., 2006; Martin et al., 2012).

Along with the benefit to individual employees, leadership development programs are also reported to have measurable effects on the wider organisational culture and organisational climate (McAlearney, 2008; McAlearney, 2005; Nicol, 2012). A review of leadership development programs undertaken across a range of healthcare facilities in the United States found that leadership programs resulted in improvement in key organisational priority areas such as quality and efficiency in healthcare, organisational efficiency in education and development activities, and staff retention due to greater staff satisfaction and better promotional opportunities (McAlearney, 2008).

The range of leadership outcomes that arise from leadership development for the individual employee should be considered alongside the outcomes of leadership development for the wider organisational when developing leadership programs targeting allied health professionals.

3.3.1 Leadership development within the healthcare setting

Given the criticality of effective leadership, it has been argued that there needs to be more leadership (and less management) training in healthcare (Braithwaite, 2008). Healthcare organisations should, therefore, consider their approach to leadership development and determine their approach to building competent leaders.

Such an investment in leadership development is worthwhile because leadership capability can be improved. In outlining their five exemplary leadership practices (modelling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart), Kouzes and Posner suggested leadership can be learned and developed, as evidenced by a discernible set of skills and attributes that improve with practice (Kouzes & Posner, 2007). Firestone agreed, reporting that transformational leadership behaviours could be developed and suggesting that leaders who participate in training make changes that are perceived as enhancing behavioural leadership by their subordinates (Firestone, 2010).

The content of leadership development programs is an important consideration in developing the leadership skills of healthcare personnel. Robbins and team researched a competency-based leadership approach that encompassed both academic and health practitioner settings for those early in their career. Their study incorporated four main competency domains: *technical skills*, such as human resources and strategic planning

ability; *industry knowledge*, including clinical processes; *analytic and conceptual reasoning*; and *interpersonal* and *emotional intelligence* (Robbins et al., 2001). Wright and colleagues found that a competency-based approach led to integrated and sustained development of leadership capacity and enhanced program quality control. They recommended that leadership development programs should consider these domains and competencies in the training of potential leaders across an organisation (Wright et al., 2000).

Kutz and Scialli studied the content of health-based leadership training by level of importance as judged by health experts. They found a wide range of potential leadership content areas, including *leadership theories*, such as transformational and transactional leadership, values management and self-leadership; and *managerial leadership and knowledge management*, such as human resource management, financial skills and information management. A third context area included *leadership issues, trends and policies*, encompassing evidence-based practice, behavioural ethics, strategic planning and team leadership (Kutz & Scialli, 2008).

While many entities are committed to leadership development programs, there can be substantial organisational challenges to their implementation. These include ensuring support for staff to attend the programs, the rapid changes that arise from political priorities, changes in leadership at higher levels, and a lack of full organisational engagement and commitment (Block & Manning, 2007). These factors require consideration prior to implementation of a leadership program within a healthcare organisation.

3.3.2 Individual leadership development

Leadership development programs focusing on individual skill development provide an important way for both new and established leaders to receive education and training to meet their specific learning needs. It has been proposed that leadership development programs include interventions that enhance an individual's effectiveness, such as skills-based training, 360-degree feedback, focused job assignments and action learning (McAlearney, 2005). Real-life experiential learning is also advocated (Garman et al., 2006).

It has also been recommended that individual leadership development strategies include participatory action learning, reflective practice and developmental evaluation in order to maximise learner growth and understanding of issues. Within this paradigm, a shift from the notion of 'I' to 'we' is encouraged, where leadership builds on individual competency towards a collective approach to change (Careau et al., 2014; MacPhee et al., 2013; Day & Harrison, 2007). In this way, leadership development might be considered to occur on a number of levels, incorporating development of the individual as well as the collective (such as units or teams) (Day & Harrison, 2007).

Coaching and *mentoring* have been described as useful ways to develop the leadership skills of an individual staff member (Bamberg & Layman, 2004). Investing in an individual by way of coaching or mentoring assists to build relationships, improve performance and enhance motivation (Goleman, 1998).

Mentoring has been defined as a 'developmental, caring, sharing and helping relationship where one person invests time, know-how, and effort in enhancing another person's growth, knowledge and skills' (Shea, 1999, p.3, in McCloughen et al., 2009). Reports suggest that nursing leadership has been enhanced by both formal and informal mentoring, a notion that could be extrapolated to allied health personnel (McCloughen et al., 2009; Hawkins & Fontenot, 2010).

Coaching is a positive approach to assist people to use their skills, experience and expertise to identify individualised solutions to life situations (Greene & Grant, 2003). It has been suggested workplace coaching improves productivity and assists with skill development of individuals, and that leadership coaching within the healthcare setting may improve employee well-being, performance and proactivity (Cavanagh & Grant, 2004; Yu et al., 2008). A literature review involving analysis of 250 health leadership programs published in peer-reviewed publications also found evidence that coaching was effective in helping employees reach their goals (Careau et al., 2014).

In summary, it is evident that leadership development programs that focus on the development of an individual provide an important mechanism to improve the quality and efficiency of healthcare services, as well as to equip healthcare professionals to manage within a complex, changing healthcare environment. In this way, individual leadership development can have a positive influence on health services and the wider organisation.

3.4 Allied health and leadership

Allied health professionals are said to be well positioned to lead health system change (Wylie & Gallagher, 2009; Markham, 2015) but they face some unique challenges in the healthcare arena. Allied health clinicians manage diverse teams requiring a multiplicity of deliverables (Lovegrove & Goh, 2009). To progress professionally, allied health clinicians must overcome structural challenges in relation to their specific leadership trajectory (either within a discipline or in allied health more broadly), particularly in comparison with other professions that have more clearly defined paths, support services and processes (Boyce, 2006a).

Furthermore, allied health organisational structures are said to still be evolving internationally and there are still relatively few experienced allied health leaders in many healthcare organisations (Lovegrove & Goh, 2009). While the past decades have seen significant changes to the status and training of allied health professionals (Braithwaite & Westbrook, 2005; Westbrook et al., 2006; Lovegrove & Goh, 2009), some still report feeling powerless to influence the healthcare system compared with their clinical colleagues (Boyce, 2006a).

Leadership is said to be pivotal to maximising the potential of allied health within healthcare services and is one area of competency for allied health practitioners (Lovegrove & Goh, 2009; O'Connor, 2003). Although there is a clear need for healthcare organisations to develop leaders, it is widely reported that there are limited research studies in Australia, and internationally, that evaluate leadership and leadership development programs for allied health and other clinical leaders (MacPhail et al., 2015; Wylie & Gallagher, 2009; Block & Manning, 2007; Leggat & Balding, 2013; Brand et al., 2012; Nicol, 2012; Joubert et al., 2016; Mak et al., 2016).

It is noted that, in healthcare, clinical leaders have a two-way focus to front-line clinicians and senior managers in the integration of effective management with high standards of clinical care (Catford, 1997). A tension between clinical leadership, with its focus on client services and preference for a collegiate approach, and general management leadership, described by some as hierarchical and corporate, has been reported (Edmonstone, 2009). This is the case for many allied health clinical leaders, who are required to interface with clinical services while managing corporate demands.

In addition, allied health practitioners employed by healthcare agencies are typically employed to undertake clinical roles and to provide direct patient care. For some, this may lead them to feeling that they are unable to progress upward into non-clinical areas such as general management (Bender, 2005).

It has been suggested that an allied health practitioner needs to be proactive if they wish to progress into health-based leadership positions (Bender, 2005). Along with formal leadership development and training, it has been recommended that the individual identify and build on their existing skills, such as communication, supervision, current clinical administrative experiences and community leadership roles. Opportunities to professionally network, thereby increasing their visibility in non-clinical areas, are also encouraged (Bender, 2005).

These contextual factors are important considerations for organisations that wish to identify and support future leaders of allied health services. Leadership development could be seen as one way to support the long-term growth and sustainability of health-based allied health leaders and to ensure these potential leaders are equipped with the relevant skills, competencies and experiences to lead into the future (Garman et al., 2006; Block & Manning, 2007; Bamberg & Layman, 2004).

3.5 Leadership and allied health: a review of the literature

Leadership capacity and capability of allied health professionals is needed for successful clinical service provision; it is well established that effective clinical leadership improves the quality of healthcare service provision and promotes leadership effectiveness (Martin et al., 2012; Snodgrass & Shachar, 2008; Wylie & Gallagher, 2009). The importance of strong allied health leadership has also been recognised by a number of allied health peak bodies/professional associations that have developed profession-based leadership programs (for example, see Boyce, 2014; Ellison et al., 2013).

Allied health practitioners are essential members of the clinical team within the healthcare system (Pickstone et al., 2008), yet it is apparent that less is known about allied health leadership than about other clinical groups (Brand et al., 2012). A review of the published literature was consequently undertaken examining the available evidence in relation to allied health leadership and allied health leadership development in the healthcare context.

The review aimed to specifically identify research about leadership and leadership development of allied health practitioners in healthcare settings. This review has been published as journal paper[2]; see Appendix 8.

3.6 Methods

This study entailed a database search from December 2014 to September 2015, using the SCOPUS, CINAHL (Cumulative Index to Nursing and Allied Health Literature), Medline and Business Elite databases, using leadership and 'allied health'/'health prof*' as the keywords and alternatives. Due to their high relevance to the search topic, a manual search was also undertaken of three leadership journals – the *Journal of Healthcare Leadership*, *Leadership in Health Services* and *Leadership and Organizational Development* – as well as the *Journal of Allied Health*.

All database searches were conducted by title, abstract and keywords with combinations of the keywords using the 'AND' Boolean operator. Searches were limited to English-only citations published after 1980. To enable future analysis and identification of duplicated articles, the EndnoteX7™ reference management software package (endnote.com) was used to manage references.

3.6.1 Search process

The search terms used for this search were 'leadership' and 'Health prof*' (Alternative word: 'allied health'). The identified references are presented in Tables 3.1 and 3.2. Some articles were listed by multiple databases; thus these figures include some duplicate articles.

Table 3.1 Database search by term

SEARCH TERM	SCOPUS	CINAHL	MEDLINE	Business Elite	TOTAL
Leadership AND Health prof* OR "allied health"	788	46	460	12	1306

[2] 'Leadership in Allied Health – A Review of the Literature' (May 2017), *Asia Pacific Journal of Health Management*; 12(1), 17–24.

Table 3.2 Journal search by term

SEARCH TERM	Journal of Allied Health	Journal of Healthcare Leadership	Leadership in health services	Leadership and Organizational Development	TOTAL
Leadership	192				192
'Allied health'		83	70	14	167
Leadership AND 'allied health'		[45]			

3.6.2 Inclusion and exclusion criteria

To be included in the review, articles were required to be published in a journal that was peer-reviewed, in English and freely retrievable. Papers also needed to reference allied health practitioners (as defined in NSW) as principal study participants, and describe studies that investigated approaches, theories or methods associated with leadership or leadership development using scientific research methods and related to healthcare or clinical service delivery.

If a paper involved allied health practitioners but did not involve original research, it was excluded from the review. Examples of papers that were excluded were opinion articles, letters and profession-based reports. A number of articles were also excluded as they reported on professions not considered to be allied health in the NSW Australian context, such as athletic trainers.

The Australian National Health and Medical Research Council (NHMRC) Evidence Hierarchy (National Health and Medical Research Council, 2009) quality screening tool was utilised to screen the quality of the quantitative studies and the Clinical Appraisal Skills Program (CASP) was utilised to screen the quality of the quantitative studies (Critical Appraisal Skills Programme, 2010).

3.7 Results

In total, 1665 articles were identified through the database search by titles/abstracts/keyword. These articles were initially scanned by title and, if required, a review of the article's abstract was undertaken. If 'allied health' was in the title, the abstract was automatically appraised.

From this process, 129 articles were retrieved with 70 articles selected for in-depth review. Thirteen duplicates were identified and removed. After application of inclusion and exclusion criteria, seven journal articles were included in the literature review. These included three qualitative and four quantitative studies. Results are summarised in Table 3.3. The search process and results are summarised in the PRIMSA flow chart in Figure 3.1 (Moher et al., 2009).

Of the articles excluded from the review, 38 did not sufficiently cite allied health practitioners as principal study participants, as defined in NSW. Eighteen did not have healthcare as the primary setting, and a further seven were not freely retrievable.

Table 3.3 Totals selected for full article review

Database / Journal	Total selected for full article review (some duplicates)	Number selected
SCOPUS	21	1
CINAHL	15	2
MEDLINE	6 (4 duplicates)	
Business Elite	4	
Journal Searches:		
• Journal of Allied Health	12 (9 duplicates)	2
• Journal of Healthcare Leadership	9	
• Leadership in health services	3	2
• Leadership and Organisational Development	0	0

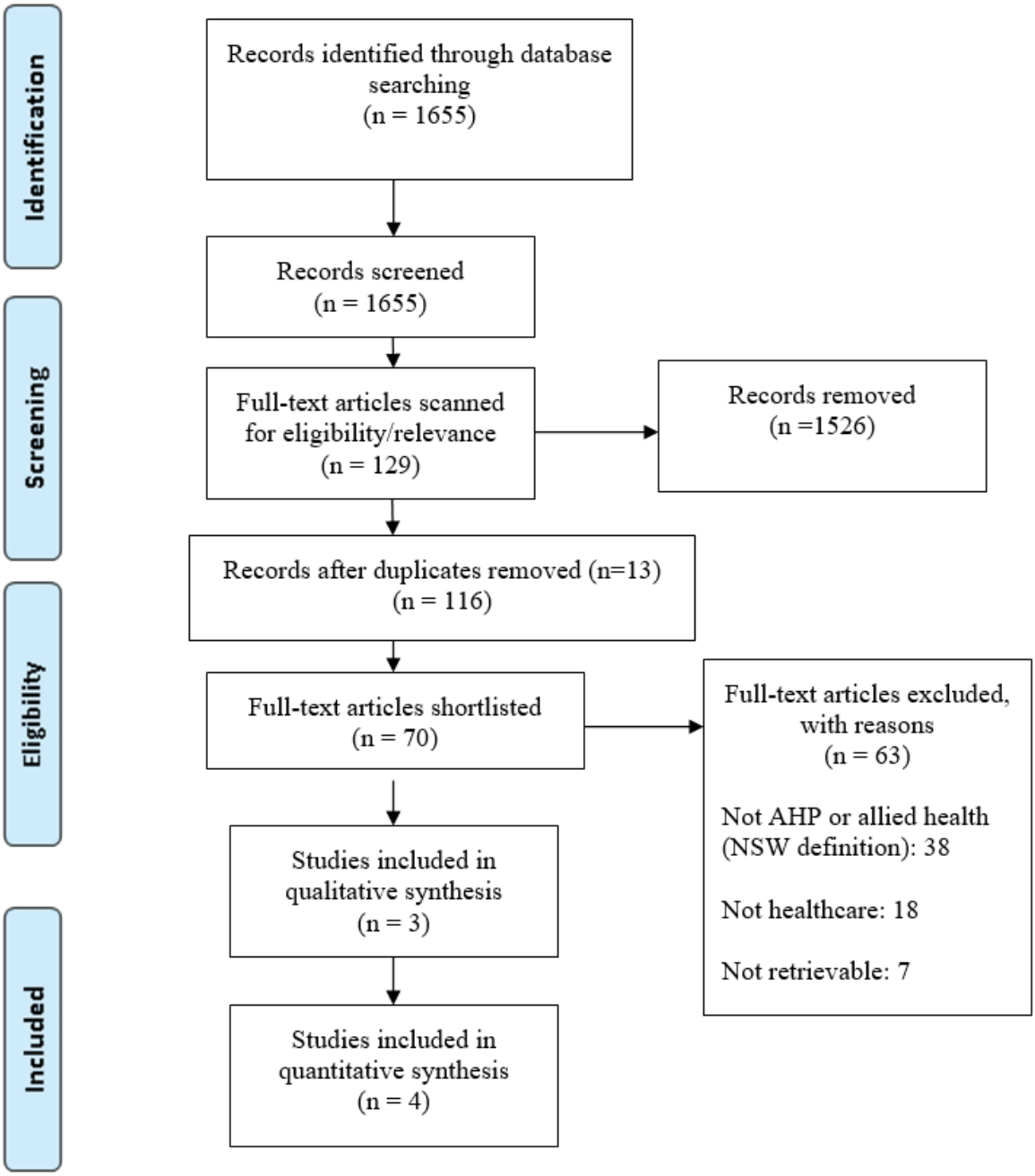

Figure 3.1 Prisma summary of search results – allied health leadership (adapted from Moher et al., 2009)

3.7.1 Characteristics of included studies

The studies were undertaken in a variety of countries and professions, as outlined in Table 3.4.

Table 3.4 Characteristics of included studies

COUNTRY	PROFESSIONS
United States (n=3)	Single discipline study (n=3) (dietetics, social work and occupational therapy)
United Kingdom: • Scotland (n=1) • England (n=1)	Multidisciplinary (n=3)
Canada (n=1)	Allied health across a National Health System (n=1)
Australia (n=1)	

An in-depth analysis of the characteristics of included studies (quantitative and qualitative) arising from the literature review can be found in Tables 3.5 and 3.6.

3.7.2 Summary of quality review

When evaluated for quality, the quantitative studies were rated as strong against the NHMRC Evidence Hierarchy (National Health and Medical Research Council, 2009). Due to a lack of information about key research processes (such as participant details, data collection methods and tools used for evaluation) and due to inadequate descriptions of reflexivity, the qualitative studies were rated as low in quality when assessed against CASP criteria (Critical Appraisal Skills Programme, 2010).

3.7.3 Theoretical frameworks

Six of the studies explicitly referenced a theoretical framework. The qualitative studies did not reference an empirical theoretical framework; instead they used models primarily based on local strategic documents. The *Full-Range Leadership Theory* and *Transformational Leadership Theory* were cited as the theoretical models for the quantitative studies.

3.7.4 Measures

A range of tools to evaluate leadership were described in the articles. Three studies used the Multifactor Leadership Questionnaire (Form 5x) (MLQ) (Bass & Avolio, 2004). One study used the Leadership Behaviour Questionnaire (LBQ). The other studies referenced assessment and evaluation tools that they had developed in-house.

Table 3.5 Characteristics of included studies: quantitative

Authors; years; journal; country	Theoretical framework	Sample/Subjects	Level of Evidence [NHMRC]	Validity	Analysis	Value	Theme	Context	No. sites
Wylie and Gallagher (2009) Journal of Allied Health Scotland	Transformational Leadership theory Scottish Leadership Development Framework	1700 postal questionnaires and MFQ-5 for six allied health disciplines (20.8% proportional representation)	Level III-3	Validity and reliability of MLQ described	Descriptive statistics; Kruskal-Wallis and Mann-Whitney U tests. Spearman's analysis.	Allied health professional (AHP) scored higher if in a senior role or had leadership training. Differences found amongst AH disciplines.	Leadership styles	NHS Scotland	Multiple
Arensberg et al (1996) Journal of the American Dietetic Association USA	Transformational Leadership theory Conceptual framework provided	1599 members of Clinical Management dietetics practice group. Of the 59.8% respondents (951) sample received Leadership Behaviour Questionnaire (LBQ) (n=150), 116 used in analysis.	Level III-3	Validity and reliability of LBQ referenced.	Descriptive statistics. Data analysis using Statistical Analysis System.	Clinical dietetics managers showed transformational leadership qualities [lowest - communication; highest - respectful leadership]. Self-rating higher than subordinate ratings. Visionary culture building sub score had the strongest predictive effect with demographic variable.	Leadership styles / outcomes	Dietetics	Multiple
Snodgrass et al (2008) Journal of Allied Health USA	Full-Range Leadership theory	Demographic questionnaire and MLQ-5. 500 randomly selected occupational therapy (OT) practitioners with 73 responses.	Level III-3	Validity and reliability of MLQ described.	Descriptive statistics. Data analysis using SPSS, Pearson correlations	In a rehabilitation setting, OT's perceive transformational leadership is associated with positive leadership outcomes. A blend of transformational and aspects of transactional leadership lead to positive leadership outcomes.	Leadership styles / outcomes	Rehabilitation	Multiple
Gellis (2001) Social Work Research USA	Transformational Leadership theory	Demographic questionnaire and MLQ-5. 234 social workers (SW); 187 responses (80%)	Level III-3	Validity and reliability of MLQ described.	Descriptive statistics. Mean/SD of MLQ scores. Pearson correlations.	SW leadership outcomes are positively correlated with transformational leadership and transactional contingent reward.	Leadership styles / outcomes	Social work in health	Multiple

Table 3.6 Characteristics of included studies: qualitative

Authors; year; journal; country	Theoretical framework	Subjects	Data collection	Rigour [CASP]	Analysis	Value	Theme	Context	No. sites
MacPhail et al (2015) Leadership in Health Services Australia	Not described	17 participants in 2011 (5 AHP; 5 nursing; 3 medical). 22 participants in 2012 (9 AHP; 10 nursing; 3 medical).	Evaluation survey questionnaire developed by authors (2012 cohort); post program reflective session; 2011 cohort follow-up of leadership roles.	Low	Descriptive statistics. Analysis of responses on Likert scale.	Work-based Clinical Leadership Programs can be feasible and cost-effective	Leadership development	Australian health service	Multiple
Block and Manning (2007) Leadership in Health Services Canada	The Leadership Life Cycle	92 participants from acute/community settings (56 nurses; 36 AHP and support service staff)	Evaluation survey questionnaire developed by authors. Applied project.	Low	Participant evaluation. Focus groups with Managers. Limited descriptive statistics on self and manager ratings.	Manager and participant reported outcomes differed significantly. Systematic leadership development has potential.	Leadership development	Canadian health service	Multiple
Leeson and Millar (2013) Nursing Management UK	7 Habits for Healthcare [based on Covey]	200 participants [nurse and allied health professional leaders]	Evaluation survey developed by first authors to 40 participants. 66 Audit questionnaires with 17 returned.	Low	Participant response to 9 questions.	Describes a Covey-based leadership program for UK AHPS and nurses to build individual leadership capacity.	Leadership development	English community/ hospital health service	Multiple

3.7.5 Study results

Review of the allied health leadership studies identified two areas of primary focus: *leadership styles and outcomes* and *leadership development programs*. The relationship between leadership styles and leadership outcomes was described in two studies and the effect of leadership development programs was described in three papers. Two articles reported information pertaining to both themes.

3.7.5.1 Leadership styles and leadership outcomes

Of the studies that described leadership styles in relation to outcomes, one comprehensive study investigated the self-reported transformational leadership behaviours in six allied health professions across the National Health Service (NHS) in Scotland using the MFQ and demographic information (Wylie & Gallagher, 2009). This study found statistically significant differences in self-reported transformational leadership behaviours across allied health disciplines, noting that podiatrists and radiographers had consistently lower transformational scores than other allied health professions.

This study found that the aggregated transformational leadership scores for occupational therapy, speech and language pathology and physiotherapy were higher than those for dietetics, podiatry and radiography. It also reported significantly higher transformational leadership scores for allied health clinicians in more senior graded positions. The researchers concluded that there are allied health groups that may require additional leadership support (Wylie & Gallagher, 2009).

A 1996 United States study aimed to ascertain the leadership qualities of nutrition leaders and determine whether there were demographic variables associated with these qualities. The LBQ was used to evaluate the transformational leadership competencies of hospital-based clinical nutrition managers in a study sample of 150 dietitians (Arensberg et al., 1996).

The study reported that transformational leadership qualities, as assessed by the LBQ were shown by nutrition leaders; however, subordinates rated their leaders significantly lower than those leaders rated themselves. The study reported that possible elements affecting transformational leadership status included gender, educational status, situational variables and personality factors. The researchers concluded that additional research pertaining to

dietetic leadership outcomes, as well as for leadership training and skill development, was required (Arensberg et al., 1996).

Practicing social workers from 26 hospitals were asked to rate their immediate managers using the MLQ in a 2001 study (Gellis, 2001). The results of this study showed that transformational leadership behaviours and the transactional factor of contingent reward were significantly related to the MLQ reported leadership outcomes of satisfaction, extra effort and leadership effectiveness for these social workers (Gellis, 2001).

A further study reported leadership outcomes in a rehabilitation setting for a single discipline (occupational therapy). This study found that occupational therapists perceived an association between transformational leadership style and positive leadership outcomes. The study also reported that a combination of transformational and aspects of transactional leadership led to positive leadership outcomes for this group (Snodgrass et al., 2008).

These four studies show a positive correlation between transformational leadership behaviours and leadership outcomes for some allied health disciplines. This research also suggests that a combination of transformational and aspects of transactional leadership behaviour (specifically contingent reward) may also lead to leadership outcomes.

3.7.5.2 Leadership Development Programs involving allied health

Of the studies selected for analysis, three reported outcomes from locally developed and delivered leadership programs that included allied health practitioners. One paper described a program that involved 200 nurses and allied health professional leaders (Leeson & Millar, 2013). Another involved nurses (n=56) and allied health clinicians and support service staff (n=36) in a locally developed program (Block & Manning, 2007). The third study involved all members of a multidisciplinary team, including allied health (n=9; 41%), nursing (n=10; 45%) and medical (n=3; 14%) clinicians (MacPhail et al., 2015). Another of the studies described leadership outcomes relating to leadership training (Wylie & Gallagher, 2009). These are discussed below.

The UK *7 Habits for Healthcare Leadership* program was locally developed and implemented. It involved allied health and nursing seniors and aimed to build individual leadership capacity (Leeson & Millar, 2013). The actual numbers of allied health

practitioners involved in the two-day program was not specified. While the program was said to be well-received by participants, there was minimal formal evaluation of the program, which limited its applicability.

The effect of a systematic approach to leadership development of 92 frontline leaders, (including 36 allied health professionals and support personnel) was investigated in a Canadian study (Block & Manning, 2007). The eight-day program was developed and implemented by the author and required participants to complete an applied project.

Focus group feedback and program evaluation were used to evaluate the program. Results indicated that the manager and participant reports of leadership outcomes from the program differed significantly. Although this paper reported that systematic leadership development has potential (Block & Manning, 2007), the lack of robust evidence to support the effectiveness of the program and/or the approach limited the applicability of findings.

A third paper described an interdisciplinary workplace-based Clinical Leadership Program (CLP) developed locally in Australia. The program, conducted over eight months, was said to lead to enhanced willingness of participants to accept leadership roles within a regional centre in Australia (MacPhail et al., 2015). Although the paper concluded that CLPs conducted in-house could be feasible and cost-effective (MacPhail et al., 2015), weak study design and limited evaluation suggest that further evidence to substantiate these claims is needed.

A robust Scottish study reported that allied health clinicians scored significantly higher transformational leadership scores if they had undertaken leadership training (Wylie & Gallagher, 2009). From these results, the authors recommend an expanded program of leadership training for allied health practitioners, but cautioned that such training required robust evaluation. Leadership training for allied health professionals was also recommended in other studies (Arensberg et al., 1996).

3.8 Discussion

This review of the allied health leadership literature generated a small number of published research articles. Of the seven selected articles, the four quantitative studies produced

robust evidence pertaining to the transformational leadership skills of several allied health professions. One study reported that allied health clinicians who had undertaken leadership development training produced significantly higher transformational leadership scores than clinicians who had not undertaken such training.

Multiprofessional leadership development programs were described in some of the studies, which saw allied health professionals as central program participants along with nurses and midwives (two studies) and the multidisciplinary clinical team (one study). Less robust evidence for the effectiveness of the programs was provided in these qualitative papers.

Only two research themes were identified as part of the literature review. Given the breadth of the leadership literature, this is surprising and highlights the need for further research into the fundamentals of allied health leadership development, including allied health leadership competencies, the impact of effective leadership on clinical care and optimal approaches to developing allied health leaders.

3.9 Limitations

There are a number of limitations to this literature review. Noting that the definition of allied health varies across countries and jurisdictions (Pickstone et al., 2008), it is clear that using the NSW definition of allied health influenced the numbers of studies that could be included in this review. In addition, this review did not include grey literature, which may also have added valuable information.

3.10 Conclusion

This review of the literature has substantiated the requirement for research in relation to allied health leadership and has confirmed the usefulness of the present thesis in examining an under-investigated area. Such research is needed for two reasons: to further evaluate leadership skills of allied health practitioners, and to determine the effectiveness of health-based leadership programs in developing transformational allied health leaders.

Chapter 4: Quality and safety in healthcare: the mandate for allied health leadership

4.1 Introduction

The primary aim of a healthcare organisation is to provide care that is safe, reliable and of high quality, with quality encompassing the elements of appropriateness, access, efficiency, effectiveness and equity (Institute of Medicine, 2001). Quality and safety are measured by evaluating the dimensions of reliability, past harm, a sensitivity to daily operations, preparing for future care, and learning and integration of information for improvement (Vincent et al., 2014).

In Australia, the Australian Safety and Quality Framework for Health Care outlines three principles at the core of safe and high quality care – consumer-centredness, being information driven and being organised for safety (Australian Commission on Safety and Quality in Health Care, 2010).

4.2 Quality and safety: The role of allied health

Allied health leaders have a role in the clinical governance of healthcare, where governance refers to the facilitation of systematic and integrated approaches to ensuring standards of clinical responsibility and accountability in order to improve safety and quality, thereby optimising patient care (Braithwaite & Travaglia, 2008). Quality and safety, along with leadership, are considered core competencies for allied health seniors (Lin et al., 2009; The Scottish Government, 2012). Central to the concept of clinical governance is the notion that clinicians, including allied health professionals, are 'best placed to encourage performance improvement among peers' in order to encourage team-based, systematic, evidence-informed service delivery (Gauld et al., 2011, p.947).

However, a 2014 report from the UK highlighted the paucity of research and grey literature specifically pertaining to allied health and measures of safety (Dorning & Bardsley, 2014). In addition, a Scottish investigation involving allied health and clinical governance found allied health professionals reported a lack of skills and support needed to be fully engaged

with clinical governance or to take on governance-related leadership roles (Hall & Curzio, 2008).

To address this, some countries have developed quality improvement training programs and resources specifically tailored for allied health professions, with one example being the Welsh National Health Service (NHS) *1000 Lives Plus Quality Improvement Guide for Allied Health Professions*, which outlines the key tools, methods and measures for quality and safety for allied health clinicians (NHS Wales, 2013). Scotland has also sought to develop its allied health seniors in areas such as continuous improvement, improvement science and promoting patient safety (NHS Education for Scotland, 2012).

Given the high number of allied health professionals employed within public healthcare organisations, this lack of empirical information about allied health in relation to quality and safety is surprising. Some suggest that it may be due, in part, to the differing power relationships and capacity for decision-making and influence reported by allied health compared with their clinical counterparts (Boyce, 2006a; Nugus et al., 2010). In this context, for example, there may be a greater focus on engaging medical and nursing colleagues at the ward level in quality and safety, compared with ensuring allied health involvement.

Furthermore, it has been suggested that there are differences across healthcare professions in relation to how they conceptualise quality and safety, with allied health professionals differing from their nursing, medical, manager and administrative colleagues in relation to their area of focus. For example, when investigating how healthcare professionals conceptualise patient quality and safety, it was found that medical personnel tend to link quality and safety concerns with personal competence and confidence, whereas allied health practitioners locate their focus within a specific environment, thereby leading them to contextualise their practice in relation to quality and safety (Travaglia et al., 2012). This difference in mental model and approach may be borne out in different approaches to patient safety at the clinical interface.

4.2.1 Allied health incident reporting in SESLHD

In accordance with the *NSW Health Incident Management Policy* (PD2014_004), SESLHD allied health practitioners are required to report all clinical incidents in the workplace

(NSW Health, 2014). This is to ensure that risks to patient safety can be recognised and preventative action taken to avoid recurrence. A reporting system, called the Incident Information Management System (IIMS), was developed by the NSW Clinical Excellence Commission (CEC) to capture all reported incident information across the NSW public health system (Clinical Excellence Commission, ND).

In SESLHD, there are between 800 to 1000 incidents reported each month. These are categorised according to the following parameters: *Principal Incident Type*, for example Fall, Medication, Clinical Management, Behaviour; *Cause of error*, for example Access, Communication, Equipment; *Principal Incident by notifier*, such as Allied Health per discipline, and *Principal Incident* by hospital/site (SESLHD, ND).

As part of this study, reporting of incidents in the IIMS ORBIT (Online Reporting Business Intelligence Tool) database by allied health practitioners was reviewed. The IIMS ORBIT system was introduced in 2014, allowing a current allied heath IIMS report from 2015–206 to be produced. Retrospective allied health IIMS data from 2011–2012 was used as the baseline comparative data and was sourced via an internal SESLHD IIMS report.

Combined allied health and allied health discipline specific date obtained from IIMS included standard reporting elements, such as number of incidents per allied health discipline, types of incidents (for example, falls) and overall incident trends. Workforce and workplace related incidents pertaining to Work, Health and Safety and Complaints were excluded. Pharmacy IIMS reports were also excluded from the review as it was determined that their results may affect findings due to the high number of medication-specific incidents.

The number of incidents per discipline and the overall number across a two-year period are listed in Tables 4.1 and 4.2. This data relates to an allied health workforce of approximately 1200 clinicians (SESLHD, 2017).

Table 4.1 Allied health IIMS reported incidents January 2011–December 2012

Health Discipline	No. of IIMS reported incidents
Dietetics	19
Hand therapy	8
Occupational therapy	36
Orthoptics	3
Physiotherapy	121
Podiatry	8
Psychology	1
Social Work	11
Speech Pathology	11
TOTAL	**218 (199 without dietetics)**

Table 4.2 Allied health IIMS reported incidents January 2015–December 2016

Health Discipline	No. of IIMS reported incidents
Dietetics	NA
Hand therapy	6
Occupational therapy	42
Orthoptics	5
Physiotherapy	113
Podiatry	4
Psychology	1
Social Work	5
Speech Pathology	5
TOTAL	**181 (excluding dietetics)**

Noting medication errors were excluded and that dietetics reports were not available for 2015–2016, results indicate limited reporting of allied health-specific quality and safety incidents by SESLHD allied health clinicians for most disciplines, with small numbers reported.

4.2.2 Allied Health Quality Improvement Activity

Quality improvement has been defined as 'the combined and unceasing efforts of everyone – healthcare professionals, patients and their families, researchers, payers, planners and educators – to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development' (Batalden & Davidoff, 2007, p.2). To evaluate allied health's involvement with quality improvement, this study will examine the number of quality improvement projects completed by allied health personnel over the 12-month period prior to being involved with the SESLHD Allied Health Leadership Development Program, compared with the number of projects after the program had concluded. This data will provide both contextual information about how allied health practitioners engage with quality improvement activities in general and data indicating whether the SESLHD Allied Health Leadership Development Program assisted allied health clinicians undertake improvement activities.

Attitudinal measures of quality and safety of study participants before and after the leadership program will also be examined. Analysis of these data is found in Chapter 7.

4.3 Quality and safety: The role of leadership

Leadership has been described as 'an essential ingredient for success in the search for safety as it is throughout the enterprise of quality improvement' (Leape & Berwick, 2000, p.725). It is aligned with improvement (Kumar, 2013) and can influence the success of a quality and safety initiative (Kaplan et al., 2010). Strengthening clinical leadership and making safety and quality an organisational focus is a feature of many of the approaches used to enhance the patient safety of healthcare around the world (Scott, 2010; Daly et al., 2014).

According to the Institute for Healthcare Improvement, leadership is an essential element of patient safety and is required at all levels to build 'will, ideas and execution' for

improvement (Swensen et al., 2013, p.6). Swensen and colleagues argue that progressing the safety agenda requires new mental models and the following five high-impact leadership behaviours:

1. fostering a person-centred approach;
2. engaging people who deliver the care in improvement;
3. having a relentless focus on the vision and strategy for improvement;
4. being transparent about findings, progress and the aim of improvement; and
5. promoting and practicing systems thinking and collaboration across team and organisational boundaries. (Institute for Healthcare Improvement, 2016; Botwinick et al., 2006; Provost et al., 2006; Swensen et al., 2013).

Moreover, there is a call for healthcare leaders to support and value their staff and to foster teamwork so that there is alignment in relation to meeting patient needs and the safety and quality of care (Ham & Hartley, 2013). Inherent in this is the requirement to support local ownership from clinicians (Shapiro & Rashid, 2011; Scott, 2010; Kumar, 2013) with research showing that a commitment-based leadership approach, in which employees are involved in decision-making, leads to improved quality of patient care, a more engaged workforce, better teamwork and a culture of learning (Khatri et al., 2007).

There is also a call for leaders of healthcare to place importance on patient safety and quality. Leaders can generate a safety culture by fostering a blame-free environment, acting when concerns are raised and making safety a priority (Berwick, 2003; McFadden et al., 2009). A transformational leadership style can also contribute to a strong culture of patient safety and the implementation of initiatives to improve safety (McFadden et al., 2009).

The NSW CEC is the lead organisation for quality and safety in NSW. In describing leadership for safe and quality care, the CEC stated that leaders require skills in critical thinking, integrity and an ability to learn from experience. They also said a new way of leadership that places the patient at the centre of care is required (Clinical Excellence Commission, 2016). This need to develop a safety culture that places the needs of patients

first is shared by many others (Jorm et al., 2009; Doyle et al., 2013; Ham & Hartley, 2013; The King's Fund, 2012; Scott, 2010; Shipton et al., 2008).

A study undertaken in the Yorkshire and the Humber Strategic Health Authority in the UK looked at the relationship between leadership, teamwork, engagement of staff and wellbeing, which the authors say is 'at the heart of delivering high quality, safe and effective care and support to service users and their carers' (p.1). They recommended team and leadership development as one of many strategies to build leadership capacity for quality (Alimo-Metcalfe et al., 2013).

However, despite these assertions that leadership is critical for successful improvement, a review of the literature found 'scarce and often scientifically limited' research evidence supporting this (Øvretveit, 2005, p.413). In his 2005 literature review, Øvretveit found research evidence that validated the proposition that leadership by senior leaders is required for successful improvement, but also that this influence is limited. His paper described a new type a leadership, "ordinary leadership for improvement", which Øvretveit defined as 'leadership by any member of the organisation to influence or support others in carrying out improvement. A leader for improvement is any person who influences others to spend time making the service better for patients' (Øvretveit, 2005, p.415). It is this "ordinary leadership for improvement" that the SESLHD Allied Health Leadership Development Program aimed to foster.

4.4 The current status of allied health leadership – the NSW allied health leadership study

With the mandate for effective allied health leadership in the provision of quality, safe healthcare, a qualitative study was undertaken as part of the overall program of research that sought to explore leadership from an Australian allied health perspective. The aim of this research was to identify the key issues affecting allied health leaders and leadership in the NSW public health system in order to develop a contemporaneous framework and context for the principal project, the SESLHD Allied Health Leadership Development

Program. This study has been published as a journal article[3] and can be found in Appendix 8.

The NSW Allied Health Directors/Advisors were selected as participants in this study as they are the most senior public allied health professionals in NSW. Directors of Allied Health (DAHs) have a role that encompasses strategic and/or operational responsibility for allied health services across an entire Local Health District (LHD) or Speciality Network (SN) role. They are the most senior allied health leaders within NSW public healthcare organisations.

4.4.1 Methods

As outlined in Chapter 1, the NSW public health system comprises LHDs and SNs. The study was completed over a six-month period from June 2014 to January 2015, with all LHDS and SNs invited to participate. Data collection consisted of two parts: (1) completion of a voluntary online survey undertaken from June to September 2014; and (2) two confirmatory focus groups conducted in December 2014 at a face-to-face Allied Health Directors meeting and in January 2015 via a teleconference. The focus groups explored thematic results from the survey and were given the opportunity to raise new issues generated as part of the discussion. Study participants were given written information about the project and each provided signed consent.

4.4.1.1 Data Collection

This section describes the data collection process of the study.

The NSW Allied Health Leadership Survey

A survey tool was developed to address the study aims, using information in the peer-reviewed and grey literature (NSW Health, 2009b; NSW Health, 2009c; Chin & Hamer, 2006; Cleary et al., 2005; Martin et al., 2012), as well as drawing on practice and research experience.

The online survey had 46 questions, grouped into eight categories:

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[3] 'Allied health leadership in New South Wales: a study of perceptions and priorities of allied health leaders' (April 2017) *Australian Health Review*, https://doi.org/10.1071/AH16135

1. Background and demographics
2. Allied health organisational structure
3. Allied health leader self-assessment
4. Functions of allied health directors
5. Personal and professional strengths and opportunities
6. Leadership
7. Allied health culture
8. Allied health attitudes.

The survey comprised 33 open and 11 closed questions. Two of the questions were presented as Likert scales using 1 (strongly disagree) to 5 (strongly agree) ratings. Three of the questions had multiple elements; for example, the 'Self-Assessment' question had nine statements, which respondents were asked to rate using a Likert scale. To ensure usability, the survey was piloted by two experienced former DAHs whose feedback led to some changes to the questionnaire. Their data were not included in the analysis.

All LHDs and SNs in NSW participated in the study, with the exception of one rural LHD (n=17). Once ethics approval was obtained from the relevant LHS/SN, online surveys were sent to the nominated DAHs/Advisors in June–July 2014, with a 100% return rate by September 2014.

Findings were organised using the framework of eight topic areas. The NVivo 10 software package (QSR International, 2012) was used to capture the data analysis.

The NSW Allied Health Leadership Focus Groups

The NSW Allied Health Committee is a regular meeting of the DAHs from across the state of NSW. Using this forum, the DAHs or their senior delegates were invited to be involved in one of two one-hour focus groups. One focus group was held where people attended in person (n=8) or participants teleconferenced (n=2). The second focus group was held via a teleconference (n=3). Of the 17 organisations participating in the study, eight metropolitan

LHDs, three rural LHDs and two SNs were represented in the focus groups (total n=13, 76%).

The focus groups were conducted to confirm that survey topics and findings represented current views. In addition, they sought to explore several elements of the survey in greater depth, including DAH influence and value, important tasks for DAHs and core DAH attributes and competencies. During the focus group process, a small number of additional topics and perspectives were identified and discussed by participants.

The focus groups were facilitated by the author. At the start of each focus group, participants were given a presentation of summarised survey findings. All verbal responses from participants made during the focus groups were recorded and transcribed verbatim. Material from the two groups was captured and analysed thematically using NVivo 10 software (QSR International, 2012).

4.4.2 Ethics

Ethics approval for this study was obtained from the University of NSW and South Eastern Sydney Local Health District Ethics Committees. Site Specific Assessment (SSA) ethics approval was obtained from 17 LHDs and SNs. One LHD declined SSA approval and was thus excluded from the study.

4.4.3 Results

The survey and the focus groups results were integrated and are presented concurrently, commencing with a description of the background and demographics of the participants whose leadership covers approximately 95% of all public allied health services in NSW. The key themes identified in the analysis are then discussed, including allied health organisational structure, personal leadership skills, functions and competencies, strengths, opportunities, culture and identity.

4.4.3.1 Background and demographics

A total of 17 (of 18) NSW public health organisations participated in the survey, including six rural LHDs, eight metropolitan LHDs and three SNs. Of these, 15 respondents (88%) were titled Executive Director or Director Allied Health. Only four (24%) were full-time DAH; 13 (76%) were part-time, predominantly at 0.5 full-time equivalent (FTE).

Approximately half (n=9) had roles that were strategic only, and eight (47%) had roles that encompassed both strategic and operational elements.

Of the respondents, the majority (88%) had worked 19 years or more since graduation, with 76% (n=13) working 10 years or more for NSW Health. Many were in a senior allied health discipline role such as Physiotherapy Manager prior to being the DAH (n=14 or 82%).

Of the respondents, 82% (n=14) held post-graduate qualifications. All respondents had received some form of leadership training, and 12 (71%) held formal leadership or management qualifications. The majority had worked in the DAH role for less than five years (n=13, 76%). Many DAHs were involved in professional activities external to their role, such involvement with their professional association (n=9, 53%).

4.4.3.2 Allied health organisational structure

Several organisational structures for allied health in Australia have been identified (Boyce, 2001; Law & Boyce, 2003). The survey found that current reporting lines and allied health organisation in NSW had shifted from the classical medical model of organisational hierarchy as initially reported by Duckett and colleagues in 1981 (cited in Law & Boyce, 2003).

Using Boyce's remaining categories (Boyce, 2001), seven respondents (41%) had structures that were organised in a matrix model (combination of management- and team-based structures). An additional four (24%) had divisions of allied health (with either rotating Chair of Allied Health within a medical division with the departments managed by the allied health profession, or a Director of Allied Health in a stand-alone allied health division). One state-wide entity (6%) was organised in a unit dispersal model (where individual allied health disciplines are dispersed according to clinical units or teams). Of the rest, five LHD/SNs (29%) reported their structures reflected a mixture of models. No entity was organised as a classic medical model (where individual allied health disciplines are organised in departments reporting to a medical director).

Participants' responses indicated that approximately 80% of allied health across NSW were organised in discipline-based departments (such as speech pathology) and 20% in

multidisciplinary teams (such as Aged Care Assessment Teams). During the same period, approximately 82% of NSW allied health staff reported to another allied health practitioner.

At a professional discipline level, the most senior NSW Public Allied Health Award classifications are Level 8 Allied Health Professional and Principal Psychologist. Such roles are considered peak senior discipline-specific positions within an organisation and positions at this grading typically have LHD/SN-wide roles and/or responsibilities relating to their discipline. Positions graded as Health Professional Level 8 or as Principal Psychologist may be strategic roles (having no line management), operational roles (line managing a discipline) or a combination of both strategic and operational duties. There were nine LHD/SNs with Level 8 Allied Health professionals (53%) and 10 with Principal Psychologist positions (59%).

In NSW, Allied Health Manager positions are typically operational roles that manage multiple allied health disciplines, either as part of a service stream (for example, a rehabilitation service) or at a particular site (for example, a hospital or community health centre). From an operational perspective, Allied Health Manager positions formed part of clinical and operational reporting structures in 14 LHD/SNs (82%).

At the organisation's executive level, all but one entity had a DAH or equivalent in their senior executive structure. At the time of the study, all DAHs reported to the Chief Executive or Director of Operations.

The focus groups discussed the evolution of allied health in NSW, noting that significant changes had occurred in relation to allied health as an entity within the work lifetime of many present.

> It's only in recent times that it's even seemed to be shown as a group. [DAH 8]

However, some maintained the view that allied health was an emerging and disparate group, still lacking organisational power. This, they felt, reflected their historical position in relation to medicine and nursing.

> I see a lot of the struggle over resources having a lot to do with the historical powerbase. [DAH 2]

Participants discussed the change in allied health management structures and the opportunity this brought. They indicated a need for allied health to keep evolving in terms of management competency.

> [H]aving the Director of Allied Health positions and then making sure within the District that there are appropriate structures and governance … means we're not always having to say 'what about us?' but we're in a position to contribute in a meaningful way at the right table. [DAH 11]

4.4.4 Allied health leader self-assessment

A series of self-assessment survey questions were posed to the DAHs using a Likert Scale of one to five. High mean scores (> 4) were found for questions relating to respondents' confidence in the DAH role and their feelings of being skilled and valued. The lowest mean score (3) was reported in relation to resourcing, where most respondents (n=8, 47%) either disagreed or strongly disagreed that they were adequately resourced. DAHs also reported that they did not have sufficient delegation to undertake their roles (n=5, 29% disagree/strongly disagree). Of all respondents, six (35%) disagreed that they felt prepared when taking on their DAH role.

4.4.5 Functions and competencies of Allied Health Directors/Advisors

Responses to open-ended survey questions showed that DAHs felt that the most important tasks for their positions were to provide strategic direction and focus and to be a point of influence for allied health at the executive level. Respondents indicated that DAHs had key roles in ensuring high standards in the provision of professional practice standards and measures, in leadership and in workforce services (initiatives, planning, and recruitment).

DAHs stated that they spent most time in administration (meetings, phone-calls and correspondence). This was followed by spending time in innovation and strategic planning, workforce services, and professional and clinical governance. Participants indicated that they would like to spend more time in strategic planning for improved and innovative allied health service models, workforce redesign and capacity building for allied health.

Respondents noted that their roles functioned within a complex environment reflecting a range of disciplines and needs. The focus groups further highlighted professional diversity as a defining feature of allied health and noted the variability of the skills brought by each DAH. The challenge of managing multiple professions and professionals was emphasised and was particularly problematic for recently appointed DAHs. Different allied health disciplines were described as having varying professional perspectives, making it a challenge to harmonise efforts across allied health service providers as well as to facilitate consistency in executive interactions.

There was an additional challenge reported in relation to change management across professions. This was felt to arise from the different perspectives brought by the individual professions, which each had a unique area of clinical specialisation and focus.

> [Because of our specialisation] ... clinicians and department heads have difficulty realigning themselves with a change of service or directions of the organisations. [DAH 12]

DAHs often undertook multiple roles that required negotiation with numerous stakeholders. Being part-time with high and competing demands was difficult, as was the perceived low capacity to influence decisions without a corresponding operating budget.

The focus groups confirmed that DAHs and other allied health seniors were felt to require skills in leadership, financial management, adaptability, communication and setting priorities. They believed these skills necessitated both self-awareness and, at times, bravery. The complexity of transitioning from clinician to manager was also noted, particularly in the context of moving from a discipline-specific position to a broader allied health role.

4.4.6 Personal and professional strengths and opportunities

In the survey, respondents were invited to respond to open-ended questions relating to personal and professional strengths and opportunities. Respondents felt that allied health professionals in general took a consultative and collaborative approach and were able to bring together, build and manage diverse teams. They noted that allied health had strengths in strategic thinking and planning, had strong values and were good communicators.

DAHs saw opportunities for allied health in various areas, including stronger measures and processes of effectiveness, better marketing of their contribution to patient care, advocating and engaging with decision-makers and influencers, and working to organisational goals. It was thought that allied health had opportunities to inspire direction and purpose in allied health personnel through leadership.

In the focus groups, respondents reinforced the need for allied health to 'state their worth' and to better describe their contribution.

> I think one of the challenges for allied health is that we don't often articulate what we bring to the table and our skill set. [DAH 1]

> You would never hear a medical or a nursing professional say that they weren't unique and had something amazing to contribute. [DAH 4]

While the group felt that there was a cultural shift emerging, support for allied health varied across LHDs/SNs. This situation was perceived to have an impact on their capacity to contribute to, and influence, their organisations.

> I've certainly seen in some particular instances where allied health are becoming far more integral in organisational structures in terms of Executives and others where they're completely ignored. [DAH 7]

Through the focus groups, the DAHs identified the complex, changing operating environment of healthcare as an important issue. This included transformations in models of clinical care, ongoing workforce reform (such as use of Allied Health Assistants and expanded-scope-of-practice practitioners) and rapid advances in technology. These were seen as important factors in considering the skill set required of DAHs and where efforts should be focused into the future.

From a clinical care perspective, it was believed to be a time of opportunity for allied health. Some areas for future development included the need for seven-day clinical service provision; furthering allied health's contribution to person-centred care; and the involvement of allied health in new and emerging initiatives, such as integrated care of people with longer-term conditions.

> A lot of those initiatives are all about allied health as major components of making them successful. [DAH 10]

4.4.7 Leadership and influence

DAHs described the important attributes of leadership. These included communication and listening; the ability to set a vision or direction; being innovative; showing authenticity and integrity; and being accountable. They saw a successful leader as one who was inspiring, visionary, effective and engaging.

Respondents felt their personal success as an allied health leader came through having self-awareness, strong relationships with others, a commitment to personal growth, technical skills, being willing to work hard and to take managed risks and explore opportunities. To improve as leaders, DAHs had engaged mentors, undertaken formal study, set personal goals and invested in personal development. DAHs felt that their most important decisions as leaders involved setting allied health strategic direction, managing the allied health workforce, allied health clinical governance in relation to professional standards and performance, allied health consultation and advocacy, and allied health operations.

The focus groups discussed ways to increase DAHs' influence and felt that enhanced political acumen was required. It was thought that DAHs needed to take on further leadership responsibility and use their roles as members of the executive team to expand their focus beyond allied health. Participants noted that a number of senior leaders in NSW had allied health backgrounds and suggested that the allied health skill set prepared them well for executive roles.

While leadership and management competencies are required for all clinical leaders, some felt allied health managers and leaders required specific action to better prepare them for the healthcare system.

> Allied health managers need to broaden their individual professional identity and function, manage in the broader allied health environment in order to influence the system and manage up effectively. [DAH 6]

However, some felt that allied health should not be singled out.

> I don't think that we are certainly unique ... it's not good that we should put ourselves as something special. [DAH 3]

4.4.8 Allied health culture

The focus groups described the defining features of allied health as being patient-focused professionals who worked in teams to provide high-quality healthcare. The culture of allied health was said to be holistic, person-centred, team-based and inclusive. Allied health professionals were considered to be a diverse group with a breadth of skills and a commitment to learning, as well as collaborators who were open, honest and had integrity. Allied health clinicians were able to view the whole person (patient) across all environments.

4.4.9 Allied health attitudes and identity

While most survey respondents felt positive for the future of allied health, DAHs did not feel that they were treated as equal to clinical (medical and nursing/midwifery) colleagues. Some felt the role of DAH was not well understood by their executive team.

Focus group members felt allied health needed to be more proactive and recommended increased cohesion as a group. They emphasised the importance of a positive collective narrative.

> [T]he story of how we can contribute is much more important than the 'poor me' conversation, to be influence at the table and how people see us as allied health, whatever profession that is. [DAH 13]

> [W]e need to bring our best attributes ... to be part of the solution … and that's how we I think begin to demonstrate our value not only as allied health professionals and managers but also to the organisation. [DAH 5]

The focus groups explored how allied health could be viewed as a construct or collective entity. Participants saw 'allied health' as non-homogeneous, diverse and relatively small in comparison to other clinical groups such as medicine and nursing. The groups highlighted the definitional and operational challenges for allied health, with 23 disciplines being included as 'allied health' by NSW Health (HETI, ND). The group also discussed the fact that the medical radiation science disciplines, such as radiography, did not report or align

with a DAH position or district allied health structures in many LHD/SNs. This was deemed inconsistent with the state-level classification of allied health by NSW Health, where these disciplines were managed under the auspice of the NSW Chief Allied Health Officer.

Focus group participants had a vision of greater strategic intent and suggested a range of actions to strengthen allied health capacity and capability. These included a mentoring/coaching program for DAHs, set up under the auspices of NSW Health, and tailored leadership training. They suggested that the group build on its strengths and create worth by involvement with state-wide initiatives and with new programs. They felt more research specific to allied health was required and that they could learn from the approach taken by their clinical colleagues.

4.5 Discussion

Allied Health Directors in NSW are tasked with providing organisation-wide vision, direction and leadership for allied health practitioners and come together regularly in a state-wide forum to work with the NSW Chief Allied Health Officer to provide this leadership at a state level.

Results and thematic analysis from the on-line questionnaire and focus groups generated information about the perceptions and priorities of these allied health leaders that is useful in the context of the SESLHD Allied Health Leadership Development Program. Findings illustrate the range of complexities and multifaceted challenges and opportunities for the group, including managing diverse multidisciplinary teams within the context of ongoing organisational change.

Organisational and governance structures for allied health in NSW have shifted since Boyce's seminal article on Australian allied health structures (Boyce, 2001). The study demonstrated that allied health clinicians predominantly report to other allied health practitioners and that senior discipline and/or allied health leader positions exist in many LHDs/SNs. This appears to have come about since senior allied health director roles were systematically appointed across NSW following recommendations in Garling's 2008 *The Special Commission of Inquiry: Acute Care Services in NSW Public Hospitals Report*.

As outlined in Chapter 1, the Garling Special Commission of Inquiry was initiated following highly publicised adverse and avoidable clinical incidents in a major tertiary hospital in Sydney, NSW (Skinner et al., 2009), with the resultant report 'based upon the principle that the safety of the patients and the quality of their care is paramount' (Garling, 2008, p.7). Commissioner Garling's final report outlined the complex challenges faced by the NSW health system, such as the growing need for clinical services, increasing costs for treatment, workforce demands and poor relationships between clinicians and management (Garling, 2008; Skinner et al., 2009).

Commissioner Garling made 139 recommendations aimed at improving the NSW healthcare system, including recommendations in relation to the appointment of medical and allied health leadership roles in NSW public healthcare organisations. These leadership recommendations were supported by NSW Health (NSW Health, 2009a) and, as a result, a number of LHD/SNs appointed DAHs for the first time. This created the opportunity for the formation of a strong, representative allied health leadership group in NSW.

In all surveyed LHDs, and most SNs, DAHs reported they participated at the executive level. This potentially increases allied health's opportunity for influence and growth in NSW and for the utilisation of its experience and knowledge to drive clinical innovation and service delivery improvement. Ongoing challenges remain in relation to the variable acceptance and utilisation of DAH roles across NSW, along with the persistent tension regarding how allied health sees itself in relation to its medical and nursing colleagues. Allied health as a professional cohort must reflect on its organisational role and agility and take greater responsibility for change (Johns, 2004).

An additional challenge highlighted by the study was the current focus of energies on administration and operational tasks by DAHs. To release more time for strategic clinical, workforce and capacity-building endeavours, Directors could question, review and, where necessary, redirect how they organise their time into more strategic endeavours.

The study found that other areas of development for DAHs include building influence and demonstrating value as a leadership group. This aligned with findings from other studies, with numerous authors highlighting the importance of clinician autonomy and influence in the effective and responsive management of clinical service provision. The issue of

balancing autonomy and accountability in clinician leadership organisational models has also been described in a number of these studies (Boyce, 2001; Law & Boyce, 2003; Mueller & Neads, 2005; Braithwaite & Travaglia, 2008).

There is a need for allied health professionals to better engage with the current healthcare system and to be more proactive and vocal in relation to the contribution of allied health. Using their strengths in effective communication, negotiation and strategy, DAHs could realign efforts towards more strategic issues influencing governance, performance, professional standards and advocacy. To support this transition, there is a role for contextualised allied health leadership development relevant to the allied health leadership context.

The study participants discussed the important role of discipline leaders in driving system-level change for allied health and for building a collaborative culture. The focus groups in particular noted the importance of broadening the vision and scope for discipline-level leaders alongside those more broadly managing across allied health services. Leadership development that fosters collective thinking and openness to change may also benefit this group.

The study results illustrated the range of leadership opportunities as perceived by NSW's allied health leaders. Although DAHs were experienced clinicians, many had been in their roles for a relatively short time. Contextualised leadership support through mechanisms such as training, coaching and mentoring provided early in their role would assist the development of transformational and adaptive leadership skills (Snodgrass et al., 2008; Block & Manning, 2007; Nicol, 2012).

The DAHs indicated their commitment to building their leadership capacity and capability, and most DAHs have invested in professional development. A system-wide approach to allied health leadership development would extend the skills and foster the conditions for senior allied health personnel to be efficacious, efficient and high-performing. This, in turn, would enable allied health to optimise its potential contribution to safe, effective and high-quality patient care.

4.6 Conclusion: NSW allied health leadership study

This qualitative research study examining allied health leadership at a NSW level provides context to the allied health leadership development study by offering new information and insights about allied health leadership, governance, culture and organisation from an Australian perspective. It provides a contemporary context for how allied health services currently operate in NSW and enhances current understanding of the key perceptions and priorities of allied health leaders in NSW.

The results of this study may be used to better understand and contextualise the complexities of allied health leadership in NSW, thereby assisting in informing present and future approaches to leadership development. Findings can also be used as a framework to evaluate the effectiveness of current allied health leadership arrangements and to determine priorities for future activities.

4.7 Conclusion

Leadership is a critical component of safe, quality-focused healthcare organisations. Although allied health leaders have a role in clinical governance and the provision of safe and high-quality care, information about allied health quality and safety in SESLHD and in the literature more generally is limited. A qualitative study examining the perceptions of allied health leaders provides information about the NSW context for allied health practitioners and the culture of allied health in the public healthcare system. Both the mandate for quality and safety and the requirements of allied health leaders and leadership should inform the design of the leadership program along with its evaluation.

Chapter 5: The theoretical underpinnings of the allied health leadership development framework

5.1 Introduction

This chapter outlines the theoretical underpinnings for this research and describes the theories applied in the development of the SESLHD Allied Health Leadership Development Program. It provides a summary of the research framework and also outlines the SESLHD Allied Health Leadership Development Program in more detail.

This research study is underpinned by two primary theoretical models – *the full range leadership theory* (Bass and Avolio, 2004) and *practice development* (Manley et al., 2008a). Other theories underpinning elements of the SESLHD Allied Health Leadership Development Program include positive psychology theories, group theory and coaching theory.

5.2 The Theory of Transformational Leadership

5.2.1 Full range leadership theory

The theory of transformational leadership was first described in 1979 by Burns, who contrasted transactional and transforming leadership. Burns described follower behaviour as either a transaction (reward for compliance) or transformation (behaviour motivated by a higher order need) (Rafferty & Griffin, 2004; Hutchinson & Jackson, 2013). These elements were further developed by Bass, Avolio and colleagues in expounding their theory of leadership. They explored leadership styles more widely and introduced a third type of leader behaviour, called laissez-faire leadership (Hutchinson & Jackson, 2013).

The theory proposed by Bass and his associates evolved conceptually over time into the present notion of the 'full range' of leadership. Developed by Bass and Avolio, the full-range leadership theory is widely utilised in leadership research (Cummings et al., 2010; Muenjohn & Armstrong, 2008; Bass & Avolio, 2004), including nursing leadership (Hutchinson & Jackson, 2013). It describes three types of leadership behaviour (transformational, transactional and laissez-faire leadership), which are represented by nine factors.

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The Multifactor Leadership Questionnaire (Form 5x) (MLQ) is an instrument extensively used to assess the nine elements of leadership behaviour along with three outcomes of leadership (Antonakis et al., 2003; Casida & Parker, 2011). The MLQ (Form 5X) has 45 items, 36 of which represent the nine leadership factors and nine of which evaluate the three leadership outcome scales (Antonakis et al., 2003; Bass & Avolio, 2004).

Transformational leadership is a collaborative approach whereby leaders elevate levels of motivation in order to improve performance. It is characterised by support to achieve greater levels of commitment, dedication, productivity and motivation within this collaborative environment (Bass & Avolio, 2004). In this process, the motives of the leader and the follower become increasingly aligned (Miller & Gallicchio, 2007).

In the MLQ, transformational leadership is assessed by the following five elements.

1. *Idealised Influence (Attributed):* This assesses how well the leader manages crises, shows self-confidence and makes personal investments in leadership.

2. *Idealised Influence (Behaviour):* This evaluates the degree to which a leader is believed to act as a role model by demonstrating important values, beliefs and purpose and by creating a common vision.

3. *Inspirational Motivation*: This assesses the leader's standards and future orientation. It also evaluates how well a leader communicates expectations and provides work that is challenging and has meaning for followers.

4. *Intellectual Stimulation*: This measures the degree to which new ideas are accepted and the status quo is challenged by the leader.

5. *Individualised Consideration*: This evaluates the level to which an individualised approach is taken by the leader in relation to each employee. (Kanste et al., 2006; Muenjohn & Armstrong, 2008)

Transactional leadership occurs where the relationships among clinicians is founded on a transactional exchange of resources (Miller & Gallicchio, 2007). In the MLQ, the three transactional leadership elements include:

1. *Contingent Reward*: This measures the extent to which a leader provides reward contingent on a person's behaviour.

2. *Management by Exception (Active):* This evaluates the level to which a leader actively looks for mistakes.

3. *Management by Exception (Passive):* This assesses the degree to which a leader fails to become involved unless there is a perceived problem. (Kanste et al., 2006)

Laissez-faire leadership is defined as an absence of leadership, characterised by a lack of clarification, conflict avoidance and lack of decision-making (Muenjohn & Armstrong, 2008).

Leadership outcomes have a high correlation with transformational leadership and are said to be related to leadership success (Muenjohn & Armstrong, 2008). In the MLQ, three leadership outcomes are assessed (Bass & Avolio, 2004):

1. extra effort;

2. effectiveness; and

3. satisfaction.

Leadership behaviour and leadership outcomes in this study have been evaluated using the MLQ (Form 5X).

5.2.2 Exemplary leadership theory

Following on from the work of Avolio and Bass in transformational leadership, Kouzes and Posner proposed a model of exemplary leadership (Hutchinson & Jackson, 2013; Kouzes & Posner, 2007). This model comprises five exemplary leadership behaviours.

1. *Modelling the way*, which entails clarification of values, setting an example and envisioning the future. It involves modelling behaviour by aligning actions with shared values.

2. *Inspiring a shared vision*, which occurs when a person feels that the leader has understood their needs and is concerned for their future, thereby enabling them to imagine possibilities and to have a common purpose.

3. *Challenging the process*, which means moving from the status quo, experimenting and taking risks. This exemplary leadership practice involves proactively seizing initiatives, exercising outsight and building on successes.

4. *Enabling others to act*, which focuses on fostering collaboration, building trust, sharing resources, strengthening others and raising self-confidence.

5. *Encouraging the heart*, which entails a personal involvement in recognising the contribution of others and celebrating success. 'Communicating to people their worth and potential so clearly that they come to see it in themselves' (Covey, 1989, p.98) is how this exemplary behaviour sees leadership (Kouzes & Posner, 2007).

Kouzes and Posner's exemplary leadership theory has elements in common with the full range leadership theory of Bass and Avolio. Assessment of exemplary leadership behaviour can occur using the Leadership Practices Inventory (LPI), where leadership behaviours are generally characterised as either transactional or transformational (Hutchinson & Jackson, 2013). The LPI was not used in this study because the existing SESLHD nursing-coordinated leadership program (which is also open to allied health professionals) involves administration of the LPI to participants. Noting that it was possible for a SESLHD allied health participant in the present study to have previously completed the nursing leadership program, the LPI was excluded as a research tool in order to eliminate the possibility of bias.

5.3 Practice development theory

5.3.1 Critical social theory: enlightenment, empowerment and emancipation

This section seeks to describe the theoretical frameworks relating to practice development. To do this, it is necessary to understand the structure that holds the ontological (questions about the form and nature of reality), epistemological (questions pertaining to the relationship between the knower and what can be known) and methodological (questions pertaining how the knower can attain knowledge of the world) premises of practice development, which may be best described as its theoretical paradigm (Denzin & Lincoln, 2005; Guba & Lincoln, 1994). In the research context, a paradigm has been defined 'as a set of basic beliefs (or metaphysics) that deals with ultimates or first principles' (Guba & Lincoln, 1994, p.107).

Interpretive paradigms are used as guides to the ontology, epistemology and methodology of qualitative research (Guba & Lincoln, 1994; Denzin & Lincoln, 2005). The major inquiry paradigms described in the literature are positivist, post-positivist, critical, constructivist and participatory (Denzin & Lincoln, 2005; Guba & Lincoln, 2005). For many in the practice development field, *critical social science* provides the theoretical paradigm for emancipatory practice development (for example, see Boomer & McCormack, 2010; Garbett & McCormack, 2002; Parlour & McCormack, 2012; Shaw, 2013; Unsworth, 2000).

Freeman and Vasconcelos (2010) state that critical theory is 'a label for a group of participatory, pedagogical and action oriented theories' (p.8) wherein members feel able to conduct their practice in a way that fosters democracy and is empowering. Its ontology reflects a realist approach encompassing elements such as culture, politics, ethics, economics and gender. Its epistemology is transactional/subjective and it has a dialogic methodology (Guba & Lincoln, 2005).

According to Fay, 'critical social science wishes to understand society in order to alter it, and it wishes to do this in a scientifically respectable manner' (Fay, 1987, p. 4). A critical social theory is defined as involving the process and the outcome of the transformation agenda. It brings together multiple beliefs about human understanding and misunderstanding, change processes, and the role of critique and of education in a society.

Both an evaluative and a political activity, it involves evaluating things in order to transform them to what they should be (Freeman & Vasconcelos, 2010).

Critical social theory reportedly originated in Germany and inspired the work of Habermas and Freire in this area (Parlour & McCormack, 2012). The critical social theory approach within nursing is said to have its foundations with Habermas in 1972, who contended that there were three areas of knowledge as a result of different needs – technical, practical and emancipatory (Fleming & Moloney, 1996).

Habermas's theory of knowledge and human interest is reflected in the seminal work on critical social science by Fay. Fay contended that the intention of critical social science would only be achieved when there was enlightenment and empowerment leading to emancipation, with these components existing as a tripartite. Fay's eight critical theories for practice encompass the elements of false consciousness; crisis; education; transformative action; the body; tradition; power; and reflexivity (Titchen & McCormack, 2008; Fay, 1987).

Shaw states that critical theory aligns with the focus in practice development of 'seeing the world critically' (p.68) so as to better understand self, the situation and the world in order to make change (Shaw, 2013). Critical social science theory is reflected in the approaches used in practice development, with the tools of critical social science used in the application of practice development methods (Shaw, 2013; Boomer & McCormack, 2010). These tools include reflection, values clarification, critical inquiry and challenge with support (Boomer & McCormack, 2010). It is contended that critical social theory is appropriate to practice development because its activities promote critical action-based learning and thinking. It also encompasses emancipatory action research, reflective practice and action learning, which have been described as methods within practice development (Shaw, 2013).

It is noted that some authors locate emancipatory practice development within both the critical theory paradigm and the constructivist paradigm (Yalden & McCormack, 2010). Research that has a constructivist orientation analyses a variety of qualitative data in a way that allows the experience and the voice of participants add to the understanding of how effective an intervention is in a way that is complementary (Christ, 2014). Its ontology

reflects a relativist approach encompassing realities that are co-constructed, and its epistemology is transactional/subjective. It has a hermeneutic methodology (Guba & Lincoln, 2005).

5.3.2 Other theoretical perspectives on practice development

Some authors in the practice development arena have incorporated other theoretical frameworks into their research work or reports. For example, Walsh and his co-investigators proposed a practice development framework of 'puzzling practice' that aimed to assist a practitioner explore, analyse and address issues (Walsh et al., 2008, p.94). Underpinned by action theory-based processes, puzzling is said to encourage curiosity and innovation in a solution-focused framework. It reportedly assists to clarify the issue to be explored, optimise engagement and generate creative solutions (Walsh et al., 2008).

Walsh and colleagues proposed that puzzling questions are optimised by assessment using a Positive, Unconditional Generative Question (PUGQ) test (Walsh et al., 2008, p.97). This has its origins in Appreciative Inquiry, which is a positive, strengths-based approach to learning, development and change (Orem et al., 2007; Gordon, 2008).

Other areas of theoretical work have also been reported. For example, McCormack and McCance developed a framework to describe caring in nursing based on Donabedian's constructs of structure, process and outcomes (McCormack & McCance, 2006).

5.4 Theories underpinning the SESLHD Allied Health Leadership Development Program

There is a range of theoretical underpinnings for specific activities undertaken as part of the SESLHD Allied Health Leadership Development Program. Further detail about the actual program and its theoretical underpinnings is found in Appendix 5.

The implementation of the leadership program was underpinned by Adult Learning Theory, which has been defined as combining art with science to help adults learn. Kaufman proposes that learning is enabled where there is self-directed learning, self-efficacy, constructivism, reflective practice and an application of theory into practice (Kaufman, 2003).

Furthermore, learning is enabled by a safe learning environment and where there is mutual planning for action. In this context, learners determine their own needs and learning objectives and implement and evaluate their own learning (Kaufman, 2003). These elements were considered when designing and implementing the SESLHD Allied Health Leadership Development Program.

A range of practice development theories (active learning; creativity; reflective practice and reflexivity; hermeneutics and facilitation), positive psychology theories (appreciative inquiry; broaden and build theory; self-determination theory), group dynamic theory and coaching theories were used in the design of the allied health leadership program. As noted, detailed information about the theoretical underpinnings of program activities is found in Appendix 5.

5.5 Allied health leadership research framework

A research framework for the SESLHD Allied Health Leadership Development Program was developed to summarise the relationships between the theories of practice development (critical social science) and the full range leadership theory (transformational leadership) with the program interventions and the program measurement. The framework is illustrated in Figure 5.1.

As noted, the leadership program was underpinned by the principles of adult learning – that is, participants were expected to be autonomous and self-directed in their learning, and learning was problem-centred and relevant to the immediate goals of the learner. The program also utilised a mix of theoretical and project-based learning (MacPhail et al., 2015; Kaufman, 2003). A detailed description of the leadership program follows in this chapter and is also described in Appendix 5.

The study incorporated Participatory Action Research (PAR) methodology to develop the program and to evaluate its effectiveness during implementation. PAR is a strategy aimed at fostering team learning and collective leadership development and is usually focused on building confidence and ensuring all participants have a voice. In this context, participatory involvement was used to raise awareness of the group and to mobilise power through collective effort (MacPhee et al., 2013).

PAR has been described as a commonly-used research approach in practice development due to its involvement of participants as co-investigators in evaluation in order to enable reflection that results in action-oriented change (Hardy et al., 2013). The process of PAR aligns with that of relational identity in leadership development, where a leader seeks to empower others in order to raise their awareness of their own power to make change (MacPhee et al., 2013). As part of the leadership program, cycles of critical reflection were undertaken and documented, with input from participants as part of the PAR process throughout the study. Aspects of the leadership program were thus developed with active input from participants.

As part of their involvement with the study, it was stipulated that participants were required to develop, implement and evaluate a person-centred improvement project of their choosing with their team using practice development. The task specifically meant that they were not personally undertaking their project; rather, their role was to facilitate and to support their team to devise and implement the project for themselves. In line with adult learning theory, participants were to manage the process of project facilitation independently in accordance with a self-determined timeframe.

The task of facilitating the project with a team aimed to build leader self-awareness as well as their relational identity as a leader with others. Leadership roles require not only individual leader identity, but relational leader identity, where a leader has strong and productive relationships with others (Day & Harrison, 2007). Structuring the project is this way sought to create an opportunity for work and learning that was shared by the team through shared action, in turn creating a sense of cohesion.

5.6 The SESLHD Allied Health Leadership Development Program

This section of the chapter provides an outline of the key elements and processes of the SESLHD Allied Health Leadership Development Program. The leadership program was designed, developed and implemented in its entirety by the author, with elements of the NSW *Essentials of Care* resources used as reference material (NSW Health, 2009b; NSW Health, 2009c; NSW Health, 2010). To conduct the program, a comprehensive knowledge

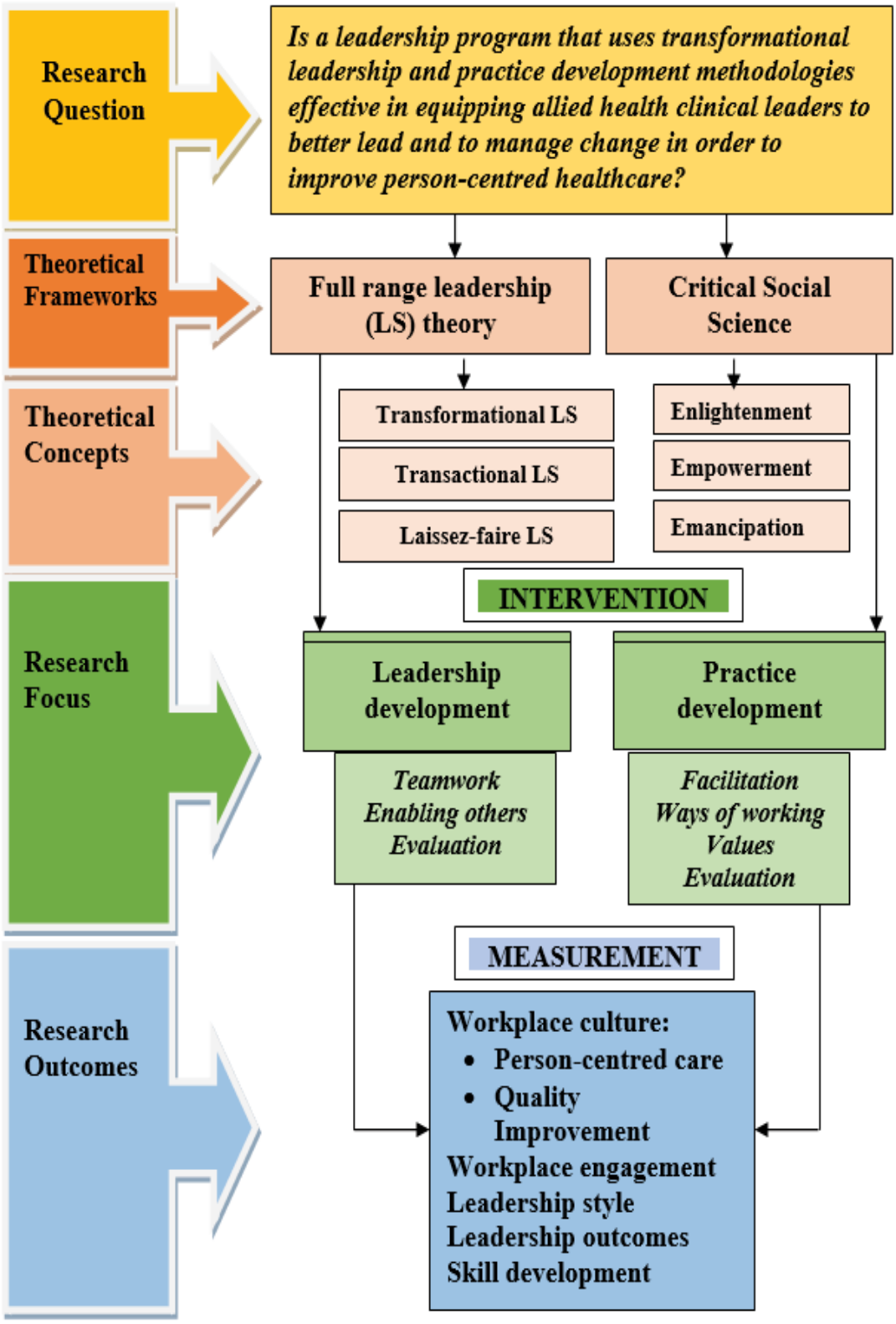

Figure 5.1 Allied health leadership research framework

of and skills in leadership development, practice development, facilitation and coaching are considered essential. Additional details about the leadership program are provided in Appendix 5.

It is noted that the author developed and implemented the program as well as evaluated the outcomes arising from the study. That is, the researcher undertook both the intervention and evaluation. In addition, the author held a senior position within the organisation at the time of the study. This could be perceived as potentially influencing the relationship between the researcher and the participants. Reflexively, these factors could create a potential for bias (Critical Appraisal Skills Programme, 2010). To ameliorate this risk, a number of steps were undertaken including using external personnel for the randomisation process, use of valid and reliable leadership, engagement and culture quantitative measures and oversight by a research advisory committee (described in 5.6.1).

5.6.1 Program model

The Allied Health Leadership Development Program was designed based on theoretical and practical considerations. To assist with this process, a Research Project Advisory Committee was convened in 2014 to provide an expert industry, clinical and advisory forum in relation to program design and format, technical content advice in relation to leadership, practice development and quality improvement, and networking advice and information in relation to key stakeholders and industry. The Committee provided independent oversight of the research. It also provided advice in relation to the development of realistic and workplace-relevant measures pertaining to the impact of the program on clinical services and program outcomes and in relation to program sustainability.

The Advisory Committee met four times in 2014–2015, providing valuable expertise and local knowledge that assisted in contextualising the program to SESLHD and health more broadly and improving the robustness of the program design. Once the program commenced, ongoing reports of progress were provided for the information of Advisory Committee members.

The aims, framework, elements and evaluation of the Allied Health Leadership Development Program are presented in a Program Model (Figure 5.2). The Model illustrates the connectivity and interdependence across program elements.

5.6.2 Sessions 1 and 2: Workshop days

The leadership program commenced with two sessions over three full-day workshops. These workshops were considered an important element of the program, and participants were asked to prioritise attendance. For a number of reasons, some participants were not able to attend all three workshop days. Those who were not able to attend one of the workshop days received an individual two- to three-hour session with the author that covered the main tenets of the workshop that was missed.

Activities within the workshops included individual, small-group and whole-of-group work; reflective tasks through the use of symbols; interactive role-play; and creative tasks to assist learning. Instructive media, such as YouTube videos, were also used during the sessions.

5.6.2.1 Session 1

The aim of Session 1 was to provide a theoretical basis and organisational context to the program through an introduction to leadership theory and practice development. Formatted as a one-day workshop, participants were introduced to the concepts of transformational leadership and the principles and methods of practice development. During this session, the importance of leadership at all levels of the organisation was introduced and the capacity for each participant to make a difference at the micro-system level was highlighted.

This session introduced transformational leadership theory and explored the concept of leadership from the perspective of those present. As the primary leadership framework adopted by health services in Australia at the time, the Health LEADS Australia framework was introduced as part of the session (Health Workforce Australia, 2013).

The Health LEADS Australia framework was developed by the Australian government and released in 2013 as a ‘nationally agreed health leadership framework’ (Health Workforce Australia, 2013, p.5). Modelled on international examples, the framework outlines five areas of focus, each with capability descriptors.

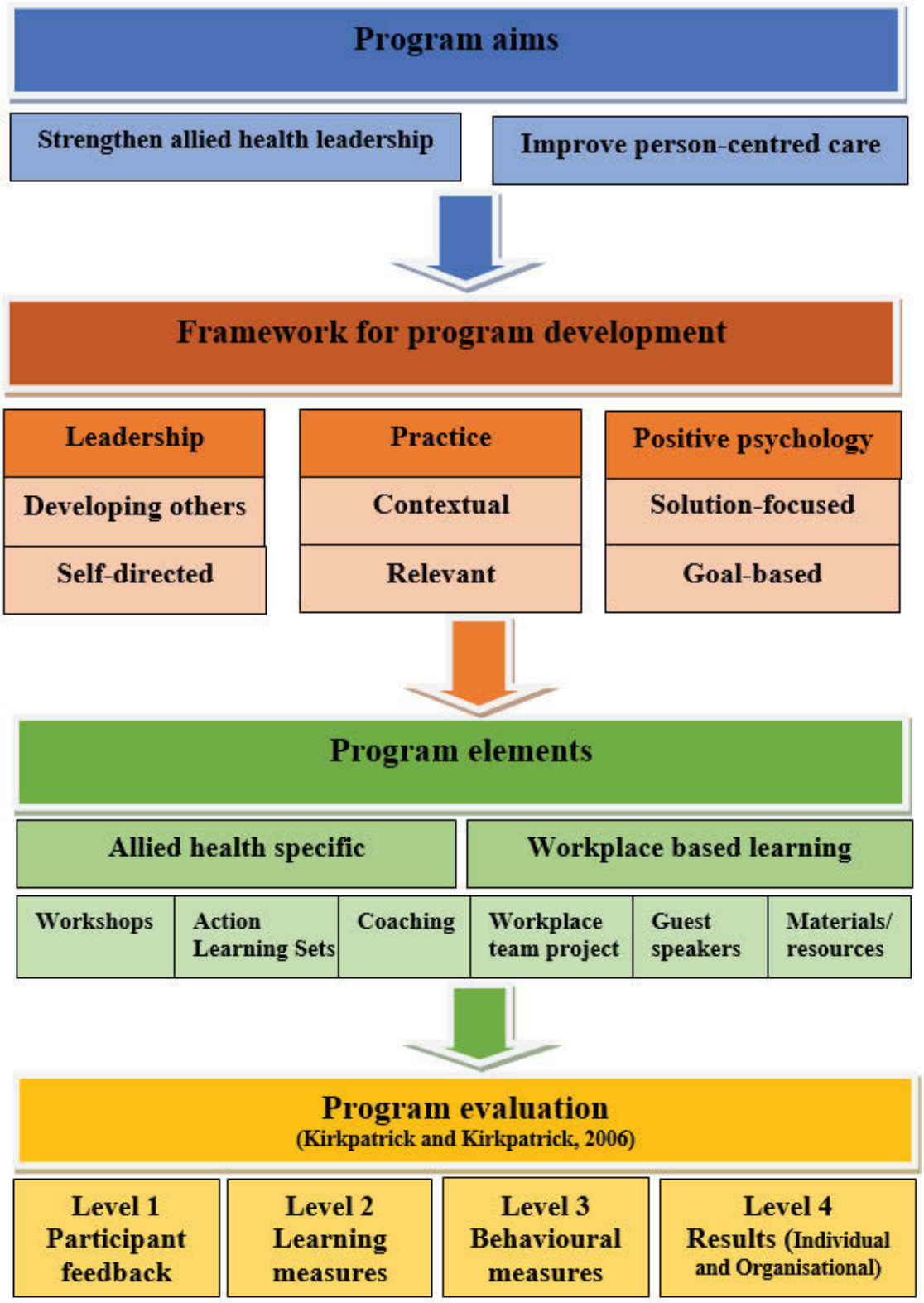

Figure 5.2 Program model

The focus areas are leads self; engages others; achieves outcomes; drives innovation; and shapes systems (Health Workforce Australia, 2013). These areas broadly align with elements from other published healthcare leadership programs, where core factors have been described as including emotional intelligence and interpersonal skills; technical skills (job-related and managerial skills), industry/corporate knowledge; skills in conceptual and analytical thinking; the ability to work in teams; skills in communication and negotiation; and adaptability (Nicol, 2012).

A detailed outline of the structure and format of workshop one, including approximate time allocation, each activity and their rationale, is found in Appendix 5.

5.6.2.2 Session 2

The aim of Session 2 was to build on the theoretical foundations of the program introduced in Session 1 through the provision of additional information about leadership theory and the tools and methods of practice development. Comprising two linked workshop days, participants explored the concepts of transformational leadership and the principles and methods of practice development in greater depth.

Facilitation aims to support and enable people to change their practice (Harvey et al., 2002) and skilled facilitation is a key principle of effective practice development (Manley et al., 2008a). Modelled on the NSW Health *Essentials of Care* facilitation training program (NSW Health, 2009b), the two days particularly aimed to equip participants with skills in facilitation and in enabling others as part of their leadership capability. A range of applied learning tasks were included in the workshop days, including activities that engaged participants creatively.

These two workshop days were co-facilitated by an experienced nurse practice developer from SESLHD. The co-facilitator regularly conducted facilitation training workshops as part of the NSW *Essentials of Care* program and was willing and given permission from her nursing supervisors to assist with the allied health program.

The outline of the structure and format of workshop two, including approximate time allocation, each activity and their rationale, is found in Appendix 5.

5.6.3 Tools of practice development

During the leadership program, participants were introduced to a range of practice development tools with the intention that they could apply these in practice in their local workplaces. Details of practice development tools and approaches were described in detail in Chapter 2.

The methods used as part of the Allied Health Leadership Development Program were:

a) *Claims, Concerns and Issues:* This approach is a form of stakeholder engagement tool aimed at building an open workplace culture and enabling staff to speak up (Guba & Lincoln, 1989).

b) *Values clarification:* Values determine what is important to the group from the outset and assist with providing a 'point of reference' for the group. Values clarification is an approach aimed at assisting the development of a shared or common vision and purpose and is deemed an important step in cultural change (Warfield & Manley, 1990; Manley & McCormack, 2003).

c) *Agreed ways of working*: The group undertakes an activity that determines the elements that are important to the group as they work together, both with others in the program as well as locally, in their own teams (McCormack et al., 2013). The process of reflection by the team builds awareness of self and others.

d) *High Challenge/High Support*: High Challenge is a process used to raise awareness of what is happening, the role a person plays in what is happening, and to encourage a reflexive mode of inquiry. High Challenge is balanced with High Support to promote a feeling of safety (non-judging) so the person feels they can act (Clarke & Wilson, 2008).

e) *Reflective practice and reflective learning:* A self-regulatory process, reflective practice is a key practice development tool (Walsh et al., 2006). Reflective practice heightens understanding and informs future actions (Sandars, 2009).

f) *Observation of practice:* Observing practice in real time can assist learning and build greater awareness of self, the environment and others (McCormack et al., 2009b).

5.6.4 Creativity

Creativity is a principle of practice development (Titchen & McCormack, 2010). Some activities entailed the use of craft materials, which aimed to foster creativity and to enable a deeper, more textured expression of response from participants. Symbols and pictures were also used to denote emotions and learnings through the program.

5.6.5 Evaluation of practice development

Processes need to be evaluated in order to ascertain their effectiveness (Berwick, 2003). When assessing the effectiveness of practice development methods, evaluation should be consistent with the principles and intended outcomes of practice development overall, including person-centeredness, collaboration and human-flourishing. Evaluation in this context should consider key points of the process – for example evaluation at the beginning, the engagement of key personnel, the philosophical framework, the approach and methodology used, time and impact and transferability of practice development findings (Wilson et al., 2008).

One option for evaluation in practice development is an approach called PRAXIS, which uses six components of appraisal:

***P**urpose:* Evaluation of the key purpose and common vision.

***R**eflexivity*: Related to critical reflection and questioning about the practice development project.

***A**pproaches*: Approaches to evaluation aligned with the values and aims of the practice development project.

*Conte**X**t:* The context of the evaluation.

***I**ntent:* A critical, in depth view of the data/findings.

***S**takeholders:* Identification of those with an interest in the findings. (Wilson et al., 2008)

PRAXIS aims to provide a 'critical and creative framework' for the collaborative, inclusive and participatory approach to practice development evaluation (Hardy et al., 2011, p.9). Using the PRAXIS framework can assist with both establishing pre-practice development measures of evaluation and post-practice development assessments of the quality, impact and effectiveness of the use of practice development processes by allied health professionals and their colleagues (Wilson et al., 2008). From this reason, an explanation of PRAXIS and its application was covered during the workshops.

5.6.6 Sessions 3 to 8: Action Learning Sets (ALS)

The third principle of practice development outlined by Manley and colleagues states that practice development entails work-based, active learning to improve care (Manley et al., 2008a). Work-based learning entails learning in and from practice (Boomer & McCormack, 2010). Active learning takes the perspective of the learner and is enabled by processes such as reflective practice, listening, and effective questioning, and reportedly leads to better collaboration and teamwork (Manley et al., 2009). ALSs are considered to be one way to facilitate work-based, active learning.

It is noted that allied health clinicians come from a broad range of distinct disciplines, each with a unique sub-culture and approach (Wagner et al., 2008). The allied health leadership program, therefore, needed to ensure that practice development could be contextualised to reflect the needs of the different allied health professionals. ALSs were seen as an effective conduit for contextualised learning within a supportive environment and formed an important part of the leadership program. Aspects of the ALS will now be discussed.

5.6.1 Definition of an ALS

An ALS has been defined as a 'continuous process of learning and reflection supported by colleagues, with an intention of getting things done, it aims to be of benefit to the organisation and the individual' (McGill & Broackbank, 2004 cited in Haith, 2012, p.12). ALSs are a structured method enabling small groups to address complicated issues by meeting regularly and working collectively.

Action learning groups, or 'sets', meet regularly with others in order to explore solutions to real problems and decide on the action they wish to take. When doing this in the set, the stages include:

1. describing the problem as it is seen;
2. receiving contributions from others in the form of questions;
3. reflecting on the discussion and deciding what action to take;
4. reporting back on what happened when action was taken; and
5. reflecting on the problem-solving process and how well it is working.

They involve the following key elements: a) The Set: a group of 6–8 people who meet regularly and b) The Projects: each participant presents an issue, or discusses their project.

The action learning process is a cyclical one, giving each member the opportunity to present a problem and comment on others. ALSs emphasise the importance of the members of the Set devising practical solutions to work-based problems themselves, thereby providing relevance for clinicians (Haith, 2012). It the context of the leadership development program, ALSs were an avenue to model approaches participants could use with the staff they supervised; that is, through the use of reflection and enabling questions, they could assist their staff to develop ownership of and solutions to local issues.

5.6.6.2 Structure and format of the ALS program

For the leadership program, each ALS was structured such that the session commenced with a one-hour seminar on a leadership topic selected by participants. This was followed by the actual learning set. Thus, the total ALS was three hours in length.

The seminar topics selected by program participants in 2014 included clinical improvement methods and improvement science, leadership styles, critical inquiry, and project management. In 2015, the topics selected by participants were clinical improvement methods and improvement science, a session from past Allied Health Leadership Development Program participants about their projects, leadership styles and critical inquiry.

The final ALS (Session 8) recapped what was covered in workshops 1 and 2 and included a discussion of future directions. Formal program evaluation through a written questionnaire was also undertaken by participants at this session. The final ALS comprised one three-hour session.

The 2014 Program participants were divided into two groups for the learning set part of the afternoon. The author and the co-facilitator facilitated one group each over the duration of the program.

The 2015 Program participants were divided into three groups for the learning set portion of the afternoon. These were facilitated by the co-facilitator, the author and a volunteer graduate from the 2014 leadership development program. The numbers of participants who attended each session are detailed in Table 5.1.

Table 5.1 Number of attendees

SESLHD ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM	**Number attendees – 2014–15 program (n=16 initially; n=14 by end of program)**	**Number attendees – 2015–16 program (n=20 initially; n=17 by end of program)**
Session 1 – Workshop 1	16	19
Session 2 – Workshop 2	15	17**
Session 2 – Workshop 3	10	17
Action Learning Set 1	13*	12
Action Learning Set 2	13	15
Action Learning Set 3	8	12
Action Learning Set 4	7	14
Action Learning Set 5	9	13
Presentation – Celebration Day	13	16

*Loss of 2 subjects- one maternity leave, one resigned from SESLHD.

**Loss of 3 subjects – one unwell; one resigned from SESLHD; one withdrew.

For each ALS group, four roles were identified. Three were self-elected volunteer roles.

a) Role 1: *Presente*r – this person shared their story with the group.

b) Role 2: *Facilitator* – this person oversaw the processes of the group, including time-keeping, monitoring ways of working, and ensuring group safety and engagement. For the 2014 program, the two facilitators were the author and the co-facilitator from workshops 2 and 3. For the 2015 program, the three facilitators were the author, the co-facilitator from workshops 2 and 3 and a graduate from the 2014 program.

c) Role 3: *Observer* – this person reviewed the overall effectiveness of the ALS, in order to give feedback to the group at the conclusion of the ALS. They did not participant in the ALS.

d) Role 4: *Enablers* – these group members asked questions of the presenter.

Each ALS facilitator used an ALS approximate timing guide and ALS template to guide activities. This was as follows:

Introduction and review – 5 minutes

Description of issue – 7 minutes

Clarifying questions – 10 minutes

Enabling questions – 20 minutes

Agreed actions and next steps – 10 minutes.

Each group then spent 20 minutes discussing how they felt the ALS was undertaken, their learnings and their challenges.

Two models of learning applicable to individuals and to organisations have been suggested in the literature (Argyris & Schön, 1996; Clarke & Wilson, 2008).

a) *Single-loop learning* – Single-loop learning occurs where errors in relation to the pre-determined values, plans, goals and rules of an entity are detected and corrected

as part of the learning process. The organisational processes and objectives are predominantly unchanged.

b) *Double-loop learning* – Double-loop learning occurs where there is recognition that there is a need to change the values and norms of the entity as part of learning. This is reported to be more sophisticated learning which may change fundamental assumptions about an organisation (Davies & Nutley, 2000).

Learning capacity may be maximised by developing skills in double-loop learning (Davies & Nutley, 2000; Tosey et al., 2011). As part of the ALS, allied health practitioners were engaged in double-loop learning as they sought to reconceptualise their issue and adjust to meet what was needed for self and/or patient care. Inherent to this learning was the questioning of behaviours and assumptions which leads to this change in practice and improved patient care standards or team experience (Clarke & Wilson, 2008).

As part of the ALS sessions, as a follow-on from the within-ALS group discussion, the wider group always reformed to share their experiences, findings and outcomes. This was seen as a mechanism for double-loop group learning.

5.6.7 Coaching

Coaching is a solution-focused approach used to assist people to retrieve and utilise their personal experiences, skills, intuition and expertise in order to find creative, individual solution to work and personal life situations (Greene & Grant, 2003). A collaborative process, it aims to improve performance, well-being and the ability of the individual to learn independently (Grant & Cavanagh, 2007). It also aims to empower and encourage the coachee to develop goals that are aligned with their inner values (Greene & Grant, 2003).

The coach's role is to assist the person move through a system of goal-setting, initiating action, self-reflection and observation of performance, evaluation and goal or action modification until the goal is attained (Grant & Cavanagh, 2007). Manager-coaches who are effective are said to be skilled in being able to produce valued and tangible outcomes, initiate and maintain coaching conversations that are collaborative and develop empathy and heighten awareness. They are also able to set SMART goals (specific, stretching; measurable; attractive; realistic; time-framed), build practical plans of action and facilitate

the individual being accountable for their outcomes (Greene & Grant, 2003; Grant & Cavanagh, 2007).

Formal coaching sessions were undertaken with members of the intervention group B in 2014 (n=8) and with volunteers from the 2015 cohort (n=14). The sessions were conducted within the participant's workplace at a mutually agreeable time. An average of four sessions were attended, usually scheduled for one hour each month. A positive practice methodology of coaching, founded in positive social constructionalist science, was utilised (Linley & Harrington, 2004; Linley et al., 2009; Burke & Linley, 2007; Christ, 2014).

5.6.8 Undertaking facilitation: Completion of a workplace project

Opportunities for learning within whole teams can assist the transformation of individuals, teams and the culture (Dewing, 2010). Team learning through dialogue and discussion is also fundamental to effective learning organisations (Senge, 1992). Senge suggests team *dialogue* entails the creative, unconstrained exploration of complex issues in an environment of acceptance and deep listening. *Discussion*, he states, involves the presenting and defence of differing views in order to determine the optimal view for decisions which need to be made (Senge, 1992).

Engaging the whole team in an improvement endeavour through the workplace project aimed to enable effective dialogue and discussion at the team level. It also sought to build leader self-awareness and their relational identity as a leader with others as part of a team.

5.6.8.1 Effective facilitation

Facilitation is a key tenet of successful practice development and aims to enable practice development to achieve its purposes, including the transformation of practitioners and practice (Harvey et al., 2002; Hardy et al., 2012). Group facilitation is an activity wherein a group is assisted to increase its effectiveness by enhancing its process and structure in order for the group to reach its goals (Schwarz, 2002).

Authors such as Schwarz and Kitson highlight the importance of the role of facilitation and discuss foundational aspects, such as core values and ground rules for groups (Schwarz, 2002; Kitson et al., 1998). Other note the capacity for facilitators to enable people to change through the application of evidence in practice (Harvey et al., 2002).

In practice development, facilitators aim to foster a culture of self-awareness and critical intent using reflective discussion involving the ideas of group members. In effective sessions, facilitators also help the group by promoting a culture that enables the group to act (Manley & McCormack, 2003). However, learning to facilitate takes time to develop, with an important skill being self-facilitation in relation to awareness, understanding and management of internal reactions to a group. 'Theory-in-use' – that is, actual group facilitation – is contingent on the facilitator's ability to manage themself in the group situation (Thomas, 2008, p.8).

The key output for the program was for each participant to facilitate a project within their workplace, requiring them to bring together a team in order to facilitate them to a join outcome (that is, the project). This required each participant to explore a number of areas such as:

> ***Assumptions:*** Assumptions in the context of facilitation include beliefs (things considered to be true) and values (things worth striving for). Interpreting one's assumptions is important to identify bias (Schwarz, 2002).
>
> Becoming aware of one's assumptions through critical reflection and inquiry can be assisted by viewing actions through various complementary lenses. These include our own experience as learners, viewing learning through the eyes of other learners, critical conversations with colleagues and seeing learning in the context of theoretical, philosophical and research literature (Brookfield, 1998).
>
> The meanings and assumptions that surround experience are an important aspect of reflection and can become a foundation upon which future choices that reflect values and ways of thinking are made (Johns, 2010). The applied work-based project aimed to highlight the assumptions of participants as facilitators. This was seen in several ways; for instance, a number of participants noted that their initial group proposal was not a shared priority for the team or group, requiring them to change their project idea.
>
> ***Stages of Change:*** Six stages that a person may go through when experiencing change have been described in the literature. These are: 'pre-contemplation, contemplation,

preparation, action, maintenance, and termination' (Prochaska & Norcross, 2001, p.443). This stages-of-change model was outlined with program participants as a way to evaluate change readiness in self and in others as part of planning for their project.

In relation to the development of facilitator skills, Crisp and Wilson proposed three stages of development, which is a helpful framework to assist facilitators understand their progress in relation to skills development and identify ongoing needs and development opportunities. These stages of development are: a) *preliminary,* where there is an initial exposure to practice development methods and facilitation with limited awareness of self and others); b) *progressive*, where there is an increased awareness of what and how learning occurs, with increasing awareness of self and others); and c) *propositional,* where there is flexibility of thought and action and an integrated sense of self as a facilitator (Crisp & Wilson, 2010, p.176). The leadership program commenced at the preliminary stage, with a view to assisting participants' transition to the other stages with practice and over time.

Individual coaching was used as an enabler of leadership development in this study. For the 2014–2015 intervention group, half the group (n=7) received individual coaching from the author. In the second cohort (2015–2016), all participants who requested coaching were given access to coaching support (n=14).

5.6 Conclusion

This chapter discussed the theoretical underpinnings for this research study, including the full range leadership theory (Bass & Avolio, 2004) and critical social theory underpinning practice development (Manley et al., 2008a). The theoretical underpinnings of elements of the SESLHD Allied Health Leadership Development Program were introduced, these included positive psychology and group and coaching theories.

The allied health leadership theoretical framework was then outlined. The chapter also included a description of the format and elements of the SESLHD Allied Health Leadership Development Program.

Chapter 6: Methodology and methods

6.1 Introduction

Practice development is an approach to healthcare improvement that focuses on emancipatory change (Boomer & McCormack, 2010; Manley et al., 2008a), with transformational leadership being one of its central constructs (Solman & Fitzgerald, 2008). However, the application of practice development to develop allied health leaders had not been investigated in the Australian context. Specific investigations in relation to the impact of effective allied health leadership on workplace engagement, workplace culture and on clinical governance measures of quality and safety had also not been reported in the literature.

The aim of this study was to investigate leadership development of allied health practitioners within a large public healthcare organisation in Australia through the SESLHD Allied Health Leadership Development Program. This is an innovative study in that it is investigating an area not previously reported in the allied health literature.

The study has two core elements:

a) the introduction of practice development methodologies alongside transformational leadership theory to develop allied health leaders; and

b) evaluation of the impact of this on workplace engagement and culture in influencing clinical service provision and clinical governance, specifically healthcare measures of quality and safety.

This chapter provides information in relation to the methodology and methods of the research study, including the aims of the study, the hypothesis, processes and statistical analyses.

6.2 Aims/Objectives

As outlined in Chapter 1, the objectives of this study were as follows.

1. To develop a leadership framework for allied health practitioners informed by transformational leadership and practice development theories and use this to design an allied health leadership program.
2. To evaluate the implementation of the leadership program for allied health clinicians within a NSW Local Health District (SESLHD).
3. To determine whether the program led to enhanced leadership capability, workplace engagement and workplace culture.
4. To determine whether the program led to demonstrable practice change and service improvement.
5. To ascertain whether the program led to measurable improvement in clinical governance, including specified measures of quality improvement.

6.3 Research question

The study examined the following research question:

Is a leadership program that uses transformational leadership and practice development methodologies effective in equipping allied health clinical leaders to better lead and to manage change in order to improve person-centred healthcare?

6.4 Scientific hypotheses

A number of hypotheses were proposed to test the intervention. In order to statistically detect differences, the hypotheses were expressed and tested as two-tailed hypotheses. Each of the hypotheses related to the specific focus areas measured by the study.

The following hypotheses related to the study outcome measures in relation to the 2014–2015 study cohort (intervention and control group):

$H_{01–06}$ – Among allied health clinicians in a Local Health District, there is no difference between allied health practitioners undertaking a 10-month allied health leadership development program and those in a matched allied health study control group without a 10-month allied health leadership development program, in measures of change in:

H_{01} *workplace culture*

H_{02} *person-centred care*

H_{03} *quality improvement*

H_{04} *workplace engagement*

H_{05} *transformational leadership measures*

H_{06} *leadership outcomes*

6.5 Research design

Qualitative research is a form of scientific research. It comprises an investigation and the endeavour to systematically answer a question by using a predetermined set of procedures, obtaining evidence and producing findings that could not be determined in advance (Mack et al., 2005). It has been described as an approach that uses 'methods to investigate, document and describe the knowledge, experiences, behaviour, opinions, values, attitudes and/or feelings of the individual study subjects in relation to a phenomenon' (Smith, 2009, p.8).

The aim of quantitative research, in contrast, is expressed by way of a hypothesis that can be evaluated statistically according to defined parameters. They can be assigned a rank, determined according to the quality of the evidence the study produces (Smith, 2009).

This study utilised a mixed methods approach to evaluation, which entails the use of both quantitative methods ('designed to collect numbers') and qualitative methods ('designed to collect words') (Greene et al., 1989, p.256). For the 2014–2015 cohort (Cohort 1), a stratified, randomised pre-test/post-test group design was used, with a control group, to quantitatively measure the culture, engagement and leadership skills of study participants before and after the implementation of the SESLHD Allied Health Leadership Development Program (the intervention). This is presented in Figure 6.1.

Figure 6.1 2014–2015 cohort: Intervention/Control group design

A second SESLHD Allied Health Leadership Development Program was implemented from May 2015 to March 2016 with an unmatched intervention group (cohort 2), as illustrated in Figure 6.2.

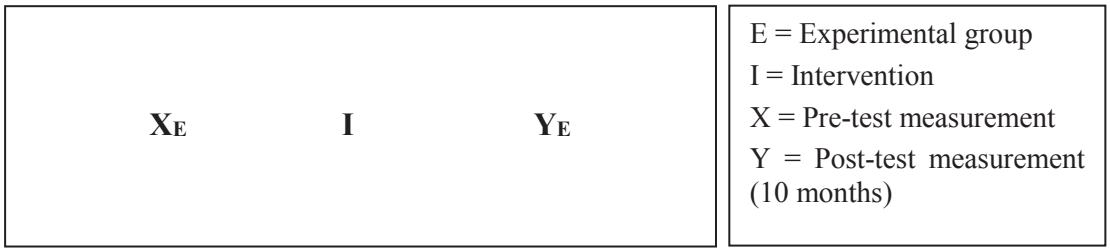

Figure 6.2 2015–2016 cohort: Intervention group design

Written questionnaires were completed by intervention group participants immediately after each workshop and action learning set (ALS), with participants rating elements of the sessions and their confidence in leadership activities, such as facilitation and asking enabling questions. Changes in these measures can be statistically evaluated.

Qualitative measures were also collected throughout the program using questionnaires. In the surveys, participants were asked to describe key learnings and to provide feedback about aspects of the program along with any suggestions for improvement. Feedback related to both their own leadership learnings and the program itself.

For the ALS, feedback from the questionnaires was also used to shape subsequent sessions. A detailed questionnaire was completed at the final ALS, which provided overall ratings in relation to elements of the program as well as learnings and insights. Copies of these questionnaires are included in Appendix 4.

In designing the research, Kirkpatrick's four levels for evaluation of training programs were considered. These levels are: *Level 1* – Reaction to the training; *Level 2* – Measures of learning; *Level 3* – Measures of Behaviour; and *Level 4* – Results (Kirkpatrick & Kirkpatrick, 2006; Steensma & Groeneveld, 2010). Originally described by Kirkpatrick in 1994, the four levels of evaluation are considered a valuable tool for comprehensively evaluating a training program (McCallum et al., 2002; Steensma & Groeneveld, 2010).

The elements of *reaction to the training* (participant feedback) and *learning measures* have been described as useful to assess the internal validity of training, whereas the third and

fourth measures of *behaviour measures* (transfer of skills in the workplace) and *results* (whether the organisational goals have been attained and at what cost) may indicate the external validity (Steensma & Groeneveld, 2010).

6.6 Definitions of variables

6.6.1 Independent variable

The main explanatory variable in this study was the intervention, which was involvement with the SESLHD Allied Health Leadership Development program.

6.6.2 Dependent variables

Allied Health practitioner perceptions of culture, person-centredness, quality and safety, engagement and elements of leadership were determined as subscale scores obtained from responses collected by the data collection surveys. Workplace engagement and leadership were measures using existing well-reported and validated tools. Both tools used a five-point scale. The dependent variables were treated as continuous and were summarised as means.

Quantitative data pertaining to participant outcomes were collected at two time points: T_0 (the baseline pre-program implementation) and T_1 (10–11 months post-program implementation). This resulted in the collection of two sets of outcome measures from each participant in the study.

6.6.3 Descriptive variables

Demographic information was collected from the data collection survey. The following elements were collected at the start of the study (baseline) and after the intervention (repeat baseline).

1. Gender (categorical: Male/Female).

2. Age (categorical: 20–29 years; 30–39 years; 40–49 years; 50–59 years; 60 years or over).

3. Place of work within SESLHD (categorical: Sutherland Hospital; St George Hospital; Calvary Healthcare; Prince of Wales Hospital; Sydney/Sydney Eye

Hospital; War Memorial Hospital; Albion Street Centre; Mental Health services; Drug and Alcohol Services).

4. Current position within SESLHD.
5. Professional discipline (categorical: nutrition and dietetics; occupational therapy; orthoptics; pharmacy; physiotherapy; podiatry; psychology; social work; speech pathology).
6. Clinical area.
7. Current employment status (categorical: full time/part time).
8. Paid hours worked per week (continuous: in hours up to 40).
9. Professional grading (categorical: Health Professional Level 2; Health Professional Level 3; Health Professional Level 4; Health Professional Level 5; Health Professional Level 6; Health Professional Level 7; Health Professional Level 8; Senior Pharmacist Grade 2; Senior Pharmacist Grade 3; Senior Clinical Psychologist; Other).
10. Number of staff supervised (categorical: 0–1; 2–5; 5–9; 10–15; greater than 15).
11. Length of time working in the NSW Health system (categorical: less than 12 months; 1–5 years; 5–10 years; 10–20 years; 20–30 years; more than 30 years).
12. Length of time in their current role (categorical: less than 12 months; 1–5 years; 5–10 years; 0–20 years; 20–30 years; more than 30 years).
13. Year graduated with first health-related qualification.
14. Undergraduate and post-graduate qualifications.
15. Leadership courses attended in the past five years.
16. Proportion of time spent interacting with patients/clients (categorical: none (fulltime management); up to 25%; 26–50%; 51–75%; 76–90%; 90–100%).

6.7 Methods

6.7.1 Participants and setting

The NSW public health system is organised into local health districts (LHD), eight of which cover the Sydney metropolitan region, and seven rural and regional NSW. NSW Health also has specialist networks (SN) for justice health/forensic mental health, and for paediatric services, as well as a network for services provided by St Vincent's Health Australia (NSW Health, 2015).

As described in 1.3.1, SESLHD is a large metropolitan public healthcare organisation in Sydney. In 2017, SESLHD had approximately 1000 allied health practitioners in the nine disciplines included in the study, which were nutrition and dietetics; occupational therapy; orthoptics; pharmacy; physiotherapy; podiatry; psychology; social work; and speech pathology (SESLHD, 2017). These allied health disciplines represented approximately 83% of all allied health practitioners (excluding medical radiation sciences) in SESLHD (SESLHD, 2017).

6.7.2 Target group

The target group for this study was allied health practitioners employed by and working in SESLHD. The study criteria initially required that participants lead an allied health team (discipline-specific) of two or more staff and be graded at a senior level – that is, NSW Health Professional (State) Award Level 3 or above, NSW Health Service Manager Level 3 or above – or be a Senior Clinical Psychologist or Senior Pharmacist in a leadership role. However, following discussion with operational allied health discipline managers, emerging leaders who were deemed high-potential employees by their manager and were employed at a Health Professional (State) Award grading of Level 2 were also permitted to apply to participate in the study.

6.7.3 Inclusion and exclusion criteria

The inclusion and exclusion criteria were determined based on the scope of the study.

Study inclusion criteria

Participants included in the study were required to be current SESLHD employees who were allied health practitioners as defined in NSW; willing to participate in research; either

led an allied health team, supervised others or wished to pursue a more senior allied health role; and had the support of their operational manager to participate in the program.

Study exclusion criterion

It was determined that allied health seniors who lead a multidisciplinary team, such as an Aged Care Assessment Team, would be excluded from this study due to the potential for this to add complexity to the analysis of results. No allied health practitioners who led multidisciplinary teams applied for the study, so this criterion was not enacted.

6.7.4 Sample 2014–2015 cohort

Subjects selected for the 2014–2015 cohort of the study were initially randomised into two groups:

- half of the subjects (n=16) were randomised into the Study Control group
- half of the subjects (n=17) were randomised into the Study Intervention group (A and B)

Each potential participant was assessed against the inclusion criteria and, once identified as suitable for inclusion in the research, was assigned a study enrolment number (project code). A two-step randomisation process then occurred.

Eligible subjects were randomly assigned to one of two study groups in a 1:1 ratio. Initial subject allocation to the control group and to the intervention group (A and B) was randomised by a person external to the study using a stratified randomisation approach.

Randomisation was undertaken by drawing the coded names from an envelope in the presence of an independent witness. Project codes denoted the site and discipline of the participant, which enabled the randomisation process to be stratified to balance sites and disciplines across the control and the intervention groups. For example, if there were four occupational therapists from one hospital nominated for the project, two would be randomised to the control group and two would be randomised to the intervention group. Where there were uneven numbers or single participants from a site or discipline, these were randomly allocated to the two groups in a 1:1 ratio.

Following the first randomisation process, 16 participants were allocated to the control group and 17 to the intervention group. One participant was initially allocated to the intervention group but, prior to commencing the program, requested to be transferred to control group due to a change in personal circumstances that precluded her from attending the leadership program. This resulted in 16 participants being allocated to the intervention group (A and B) and 17 participants to the control group.

A second randomisation process was undertaken with the subjects selected for the intervention group. Randomisation to Intervention Group A (those who did not receive individual coaching as part of their program; n=8) and Intervention Group B (those who did receive individual coaching as part of the program; n=8) was undertaken by a person external to the study by drawing the coded names from an envelope in the presence of an independent witness. A schema of the randomisation process for the 2014–2015 cohort is illustrated in Figure 6.3.

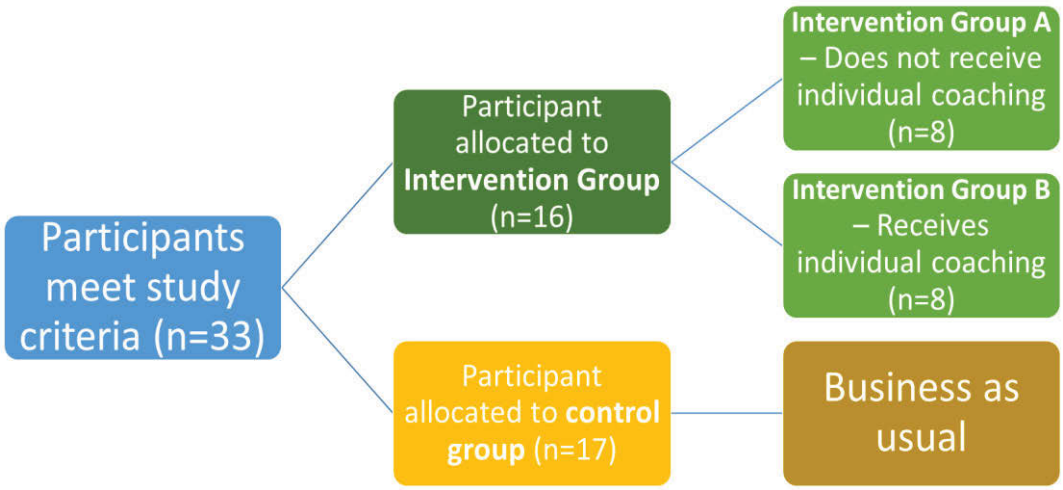

Figure 6.3 Randomisation process for the 2014–2015 cohort

6.7.5 Sample Size 2014–2015

The size of the sample was determined based on the number of volunteers who met the study inclusion criteria and who provided signed consent to be involved in the study.

The minimum number of participants for the program to be viable was determined prior to the study commencing. It was deemed that a minimum of 10 participants were required across both groups, noting that loss of subjects was a risk to the research. There were 33

participants who volunteered and consented to the study. All 33 allied health volunteers were included in the study as all participants met the study criteria.

At the conclusion of the program in 2014–2015, there was a final cohort of 30 of participants across the control and intervention groups. This reflected a loss of three subjects over the 10-month program. This number of participants was considered adequate for program evaluation purposes.

6.7.6 Recruitment 2014–2015

Invited participants included senior allied health clinicians who managed a discipline-specific team of two or more staff employed in SESLHD, and more junior allied health clinicians (level 2) who were deemed high-potential employees by their manager.

Invitations to participate in the study were initially provided via email to allied health discipline Heads of Departments, who then sent out the information to relevant allied health personnel within SESLHD. The Executive Directors of Operations of SESLHD facilities were consulted and their permission sought prior to this advice being transmitted to staff within their respective services and hospitals. Personnel included the (then) Director of Operations of Sutherland and St George Hospitals; the (then) Director of Operations of Prince of Wales and Sydney/Sydney Eye Hospitals; the General Manager of the Royal Hospital for Women and the Director of Operations Primary and Ambulatory Care (n=4).

Information sessions outlining the proposed project and subject requirements were offered in February–March 2014 at three hospital locations in SESLHD (Prince of Wales Hospital for the Randwick Campus, St George Hospital and Sutherland Hospital). Participants were able to self-nominate to participate in the study. While permission to enroll in the program was required from the relevant operational manager due to the time commitment involved in attending the action learning sets and workshop days, involvement in the study from an individual staff member was completely voluntary.

The recruitment phase of the study took place over March–April 2014, following both SESLHD and University Human Research Ethics Committee approval. At this time, a meeting (either face-to-face or by telephone) was held with each potential study participant

to outline the study, what participation in the research involved, their role in the study and the benefits of taking part. The likely time commitment involved in the study was also discussed. Potential participants were provided with other information, such as the workshop dates and program deliverables. They were also advised of the requirement to undertake a project and present their findings as part of the leadership program.

The possibility that participants may be randomised into the control group in the first year of the study was highlighted. Participants were also advised that should they be randomised into the control group, they would be offered the opportunity to participate in the program the following year and, if they were randomised into the intervention group, they may further be allocated to revived personal one-on-one coaching as part of their program. Written informed consent was obtained from all volunteer study participants (see Appendix 2).

6.7.7 Intervention 2014–2015

Intervention Measures

Study participants were randomised into the study control group or the intervention group (A and B). A schema of the research methodology for Cohort 1 is illustrated in Figure 6.4.

6.8 Study protocol – Experimental Group (2014–2015)

6.8.1 Intervention Group A: Participants involved in the leadership program

This group completed pre- and post-program measures in relation to their leadership skills. They undertook the leadership program and participated in the action learning sets.

6.8.2 Intervention Group B: Participants involved in the leadership program plus coaching.

Intervention Group B participants undertook the leadership program and action learning sets as per Group A. In addition, the leader was provided with individual leadership coaching (n=4 sessions) with the author as part of their program. Participants were advised that coaching would commence after the workshop days were completed.

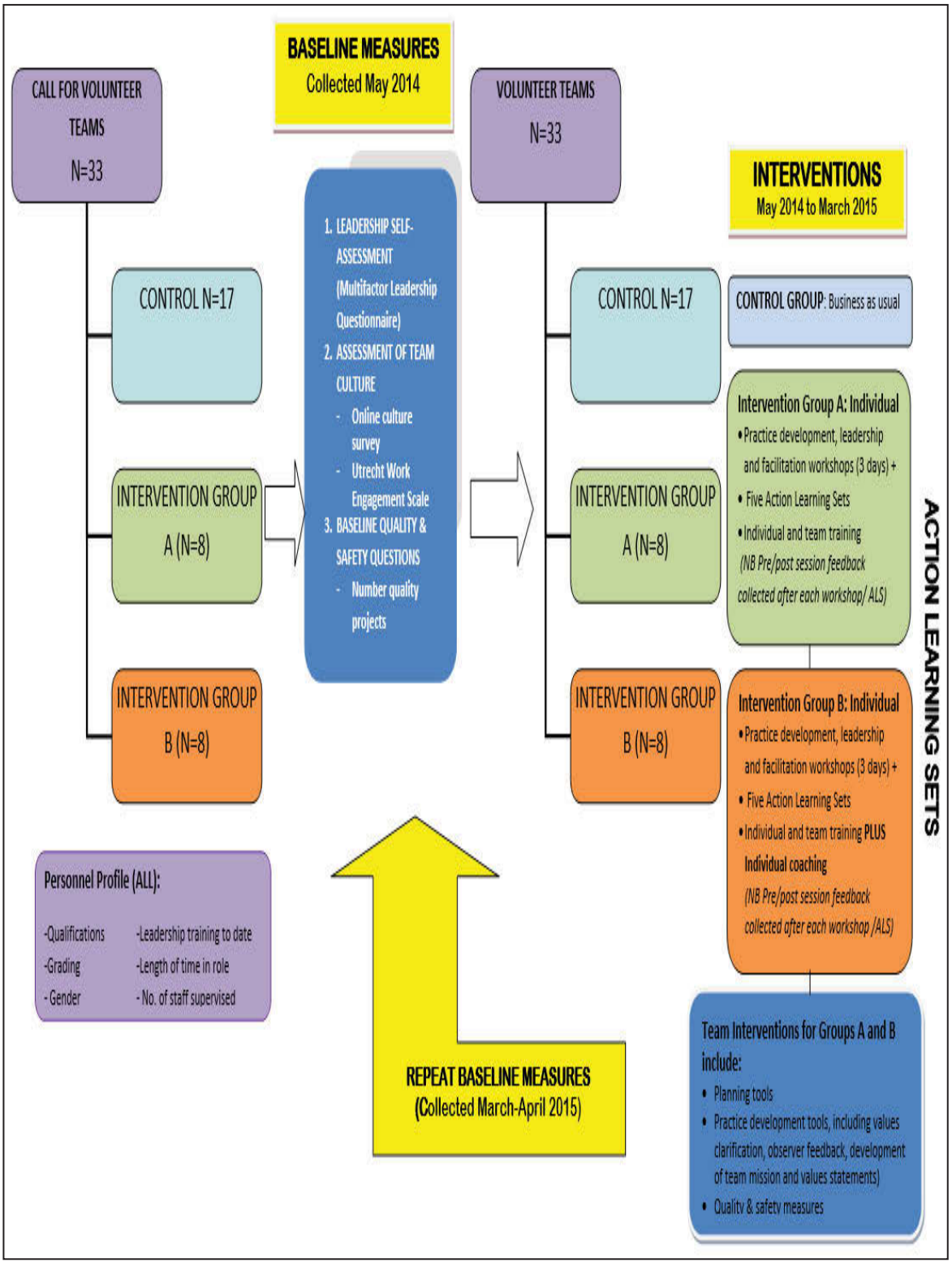

Figure 6.4 Schematic illustration of research methodology (Cohort 1) 2014–2015

6.8.3 Summary of the Allied Health Leadership Development Program

As described in Chapter 5.6, the SESLHD Allied Health Leadership Development Program included workshops and action learning sets scheduled over a ten-month period. These were attended in person. Attendance at the workshop days (sessions 1 and 2; n=3 days) was considered mandatory for the program. While encouraged to attend as many of the scheduled learning sets as possible, attendance at all sessions was not considered a mandatory part of the program. Thus, most participants did not attend all of the learning sets; however all attended at least three of the five scheduled sessions.

The Allied Health Leadership Development Program was scheduled as follows.

Session 1: Introduction to leadership theory and practice development (one-day workshop session).

Session 2: Development of leadership and facilitation skills. Introduction to practice development tools and methods (two-day workshop session).

Sessions 3-7: Leadership topics (subjects based on needs identified from the group) followed by action learning set. Topics included leadership styles, critical inquiry, improvement science, and project management (four three-hour action learning set sessions).

Session 8: Evaluation and future directions plus action learning set (one three-hour session).

As noted, participants were required to facilitate their team to develop, implement and then evaluate a person-centred improvement project as part of their involvement with the program.

Participants were also required to showcase their teams' projects and their personal learnings at a 'celebration day' scheduled approximately 10 months after the program commenced. Self-reflection through mechanisms such a journalling throughout the program was also encouraged, and each participant was provided with a reflective journal containing several models used to assist the process of reflective practice, as well as electronic information containing key articles and resources.

6.9 Study protocol: Control group

6.9.1 Control Group: Usual practice/no additional intervention

As with the experimental group, this group completed pre- and post-program measures. However, they continued 'business as usual', did not undertake the leadership program and did not participate in the action learning sets. As previously noted, control group participants were aware that they would have the opportunity to undertake the program in the following year.

6.10 Second Allied Health Leadership Program: 2015–2016 cohort

Following an expansion of the program of research, a second SESLHD Allied Health Leadership Development Program was implemented. This was undertaken from May 2015 to March 2016 with an unmatched intervention group. A schema of the research methodology for Cohort 2 is illustrated in Figure 6.5.

In line with ethics approval, all study participants in the 2014–2015 control group (Cohort 1) were invited to join the 2015–2016 Allied Health Leadership Development Program (Cohort 2). Initial interest was shown by 10 members of the control group. Individual meetings were held once again with participants who had expressed interest in the program to outline program requirements. Following this process, six participants from the control group enrolled in the 2015–2016 program.

An Expression of Interest process was instigated within SESLHD, with allied health Heads of Department inviting new nominees for a second SESLHD Allied Health Leadership Development Program. Participants joining the study as new participants were required to meet the inclusion and exclusion criteria of the study and to provide signed consent for program involvement. An individual meeting was undertaken with all new potential study participants to outline the nature of the program and the commitment required.

Fourteen new participants enrolled in the program; however three people withdrew after the program commenced (one person resigned from SESLHD, one was unwell and one chose not to continue with the program). There were 11 new participants in total.

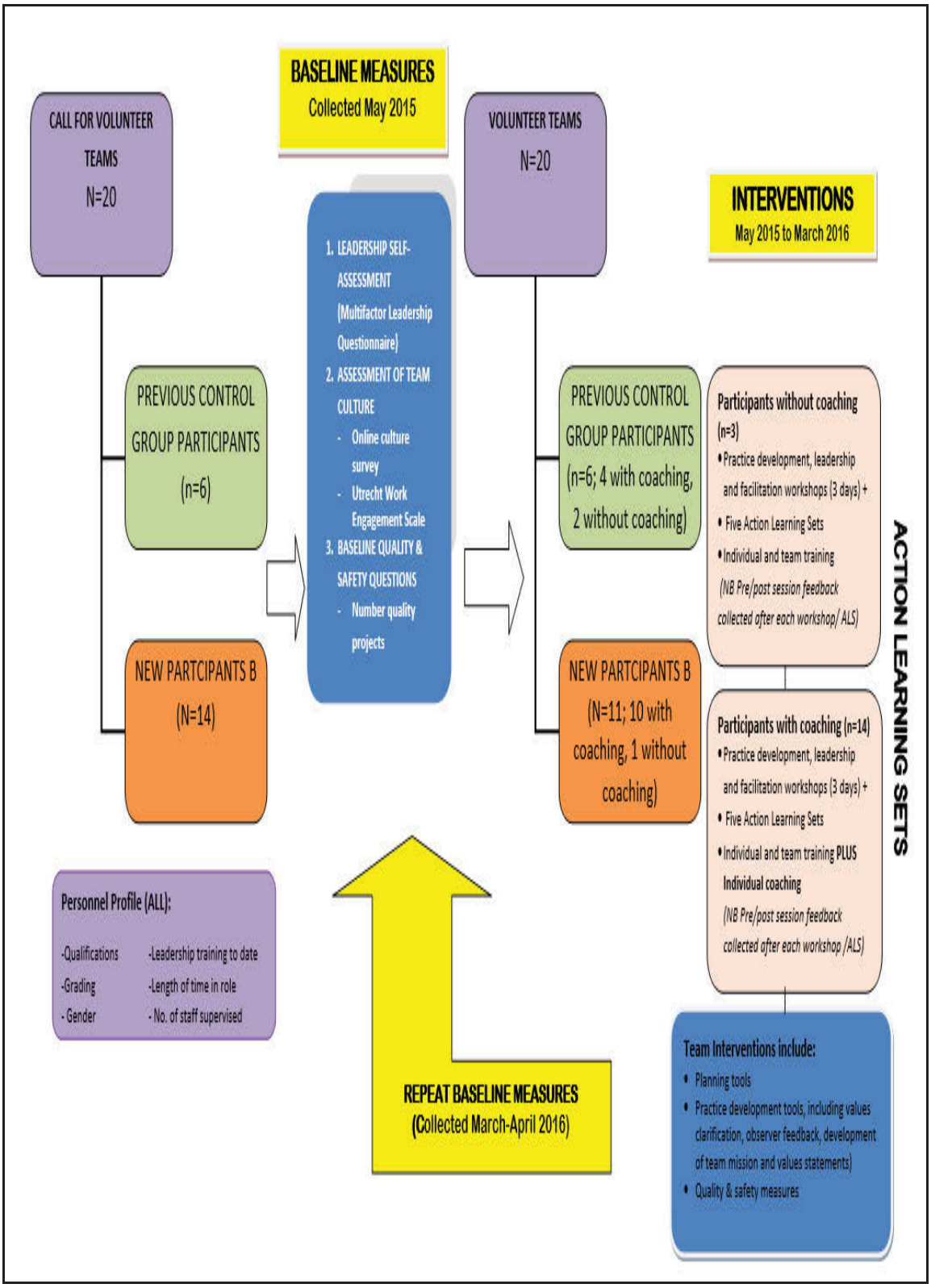

Figure 6.5 Schematic illustration of research methodology (Cohort 2) 2015-2016

For the second SESLHD Allied Health Leadership Program (Cohort 2), all participants were given the option of individual coaching. Fourteen of the 17 participants elected to receive individual coaching as part of the program. Nine of the 14 received individual leadership coaching sessions (n=4) with the author as part of their program. Five of the 14 received coaching sessions (n=4) from one of three other experienced coaches from within SESLHD.

The total number of participants in Cohort 2 who completed the 2015–2016 Allied Health Leadership Program was 17. The results from this cohort will be reported separately.

6.11 Instrumentation

6.11.1 Baseline measures instruments: 2014–2015 group

Baseline data was collected in May 2014 from study participants (n=33), including data from the control group (n=17) and from the intervention group (n=16). Participants were sent two online baseline surveys to complete as part of the study.

6.11.1.1 Survey 1: Demographics and measures of workplace culture and engagement

Survey 1 was an online survey instrument developed specifically for the purpose of the study. It sought to collect information in three key areas: subject demographics, workplace culture and workplace engagement.

6.11.1.1.1 Survey 1: Subject demographics

The survey gathered information about standard characteristics of participants. Questions related to their gender, current role in the organisation, qualifications, year they graduated with their primary qualification and their professional grading in accordance with the NSW Allied Health Award, the NSW Psychologist Award and the NSW Pharmacist Award. Participants also reported their leadership training, how long they had been in their current position and the number of personnel they supervised/managed. Information was also gathered about their involvement with quality activities. Specific information about subject demographics is presented in section 6.6.3.

6.11.1.1.2 Survey 1: Measures of Workplace culture

A five-point Likert rating scale from strongly disagree (0) to strongly agree (5) was used to evaluate workplace culture. Participants were asked 20 questions, which related to three primary areas:

a) their current role (five questions);

b) person-centred approaches (10 questions); and

c) quality and safety (five questions).

The workplace culture survey was developed by the author; however, several questions used in the survey were adapted from the Prince of Wales Hospital Nurse Engagement Survey (Johnson, 2010). The survey questions used as part of Survey 1 to ascertain workplace culture are detailed in Table 6.1.

6.11.1.1.3 Survey 1: Measures of workplace engagement

Engagement is a subjective state said to be an element of well-being (Seligman, 2012). Workplace engagement has been defined as 'a positive, fulfilling work-related state of mind that is characterised by vigour, dedication, and absorption' and is considered the antithesis of workplace burnout (Schaufeli et al., 2006, p.702).

Engagement is considered to be a persistent cognitive state that enables a feeling of energy and connectivity with work, along with a capacity to manage workplace demands (Schaufeli et al., 2006). It has been linked with positive attitudes to work, better staff retention and higher levels of performance (Crawford et al., 2010). Others suggest that work attributes such as variety, autonomy and challenge, along with leadership and personal characteristics, influence employee engagement (Macey & Schneider, 2008; Crawford et al., 2010).

Staff engagement at baseline was obtained using the Utrecht Workplace Engagement Scale (UWES) (Schaufeli & Bakker, 2004). The UWES is a 17-item self-reported questionnaire developed to evaluate the three dimensions of engagement – vigour, dedication, and absorption. The authors suggest that the neutral term 'work and well-being survey' be used to implement the tool, rather than 'work engagement' due to its connotations (Schaufeli & Bakker, 2004). This suggestion was followed when developing Survey 1.

Table 6.1 Survey 1 questions: Workplace culture

Category	Question
About their job	My job gives me a lot of satisfaction.
About their job	My job is very meaningful to me.
About their job	I feel enthusiastic about my present work.
About their job	My work gives me an opportunity to utilise all my skills.
About their job	I feel able to successfully overcome the challenges of change
Person-centred care	My team provides quality patient care
Person-centred care	My team provides timely patient care
Person-centred care	I spend time thinking ahead to improve our clinical services
Person-centred care	Clients and their families are fully involved in determining their care.
Person-centred care	I make suggestions to patients which improve their longer-term recovery and health
Person-centred care	I anticipate what the patient and their family might need to know and communicate this to them
Person-centred care	Patient input is integrated into their treatment plans
Person-centred care	I have used patient stories to inform clinical practice
Person-centred care	I try to see things from the patients view point
Person-centred care	I try to think about how I would feel in the patient's situation
Quality and safety	The quality of patient care in my team is as good as it could be.
Quality and safety	There is strong teamwork in my service.
Quality and safety	Near-misses are always followed up.
Quality and safety	Quality is a high priority for my team.
Quality and safety	I regularly undertake quality activities

The median internal consistency of the UWES was reported as good (Cronbach's alpha greater than or equal to 0.70), as was stability. Validity of the UWES has been extensively evaluated and reported in the literature (Schaufeli & Bakker, 2004; Schaufeli et al., 2006).

6.11.1.2 Survey 2: Measures of leadership

The MLQ (5X-Short) is a 45-item self-reported questionnaire designed to measure nine subscales of leadership. It is multidimensional and uses a 360-degree evaluation to ascertain the views of managers, peers and subordinates, as well as self-report (Kanste et al., 2006).

The MLQ is used widely in the literature to measure leadership and, as a tool, has been extensively evaluated (Bass & Avolio, 2004; Bass et al., 2003; Kanste et al., 2006). The degree of internal consistency of the MLQ is reported to be high, with improved validity with the MLQ (5X-Short) (Antonakis et al., 2003; Bass & Avolio, 2004; Avolio et al., 1999). Results of a study examining the MLQ found that the MLQ (5X-Short) was valid and reliable and could adequately measure the nine components of the full range theory of leadership (Antonakis et al., 2003). In evaluating the psychometric qualities of the MLQ with nurses, Kanste and team found the MLQ to be a reliable instrument in relation to internal consistency and stability among nursing personnel (Kanste et al., 2006).

The MLQ (5X-Short) (Bass & Avolio, 2004) was used to collect baseline data from all study participants. The elements of the MLQ were transcribed into an online survey tool and formed the basis of Survey 2. The MLQ was used, collected, scored and administered in line with all stipulated administration guidelines (Bass & Avolio, 2004). The online survey tool was checked and approved for research usage by Mind Garden™ prior to the survey being distributed to participants (see Appendix 3).

Along with a leader self-rating, an online other-rater version of the MLQ (5X-Short) was also developed and utilised as part of evaluation. All study participants were asked to nominate two or more individuals who could be asked to evaluate their leadership skills using the questionnaire. Other raters could include a more senior worker who was their main supervisor, a more junior worker who they supervised, and a peer worker. A minimum of two external ratings were received for each study participant, one of which

was the person's line manager. A total of 85 surveys was received by other raters at baseline for the 2014–2015 study group (n=33 participants).

6.11.1.3 Other measures

Workshop questionnaires were developed by the author and aimed to reflect the study aims. After each workshop, participants were asked to respond to questions asking them to rate themselves using a five-point nominal scale. The same set of questions were collected at each session with a view to determining median levels of confidence in targeted areas within the group.

Examples of the rating scales and questions include:

a) 1=Very little or no knowledge; 3=moderately knowledgeable; 5=extremely knowledgeable
    - current knowledge of Practice Development
    - current knowledge about leadership
    - current knowledge about quality and safety

b) 1= Strongly disagree; 5= Strongly agree
    - The workshop was well organised
    - The goals for this workshop were clearly stated
    - The content was clearly presented
    - Overall I was satisfied with the quality of this workshop
    - I would recommend this workshop to my colleagues

c) 1= Not at all; 5=very
    - How relevant was the workshop content to your current role?
    - How interesting did you find the workshop overall?
    - How high was the quality of the workshop overall?
    - How much will your practice change as a result of the workshop?

In addition, participants were asked open-ended questions about the most and least useful aspects of the workshops and were invited to make suggestions for improvement.

Participants were also asked to complete a written questionnaire developed by the author following each of the action learning sets (ALS). The ALS questionnaires were used by participants to rate elements of the sessions along a five-point nominal scale and their confidence in specific activities (such as facilitation and asking enabling questions) also using a five-point nominal scale. They were also invited to describe key learnings. Feedback from the questionnaires was used to shape subsequent ALS sessions.

Copies of the questionnaires used for the workshop and the ALS can be found in Appendix 4. A detailed Allied Health Leadership Development Program Evaluation questionnaire was completed at the final ALS, which provided overall ratings on an extended number of elements of the program. This can be also be found in Appendix 4.

6.11.2 Baseline measures: 2015–2016 group

Baseline data was collected in May 2015 from study participants (n=20) in the second Allied Health Leadership Development Program cohort, which included six participants from the control group. Using a separate Survey 1 online link, information was collected at the same time as repeat data was collected for participants in the 2014–2015 study group.

6.12 Statistical methods

A mixed methods approach was used to evaluate the program. Research using mixed methods has been described as involving the collection, analysis and mixing of quantitative and qualitative approaches in a study (Creswell et al., 2006). A formal definition of mixed methods research is 'research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry' (Teddlie & Tashakkori, 2006, p.15).

Five empirically-based purposes of mixed-methodological research papers have been described in the literature.

a) *Triangulation*, which seeks to determine convergence and corroboration of research findings from different methods while studying the same phenomenon.

b) *Complementarity*, which endeavours to elaborate, illustrate, clarify and enhance the finding from one research method with the results from the other method.

c) *Development*, where the findings from one method are used to help inform the approach from the other method.

d) *Initiation*, which seeks to identify paradoxes and contradictions leading to recasting of the research questions or the research results using questions or results from the other method.

e) *Expansion*, where the breadth and range of inquiry is expanded by the different research methods for the different components of the inquiry. (Greene et al., 1989; Onwuegbuzie & Johnson, 2006)

This was a complementarity mixed methods study, as quantitative and qualitative measures were used to evaluate overlapping but different facets of evaluation, enabling a more enriched, elaborated picture of evaluation to emerge through greater richness of data (Greene et al., 1989; Onwuegbuzie & Johnson, 2006). The rationale for using a complementarity mixed methods approach was to 'increase the interpretability, meaningfulness, and validity of constructs and inquiry results by both capitalizing on inherent methods strengths and counteracting inherent biases in methods and other sources' (Greene et al., 1989, p.259).

There are a number of typologies of mixed methods design, based on criteria such as the number and priority of methodological approaches used, the type of process used for implementation, and the stage at which the approaches are integrated (Teddlie & Tashakkori, 2006). The typology for this study is illustrated in Figure 6.6 to demonstrate how integrated rounds of data collection, including qualitative views as well as quantitative data, were collected throughout the Allied Health Leadership Development Program.

Quantitative data collected through Survey 1 and Survey 2 and from the workshops and ALS questionnaires as part of the leadership program were analysed using the using the Statistical Package for the Social Sciences (SPSS) version 21.0 (SPSS, 2012). All the statistical tests were undertaken at the 5% significance level.

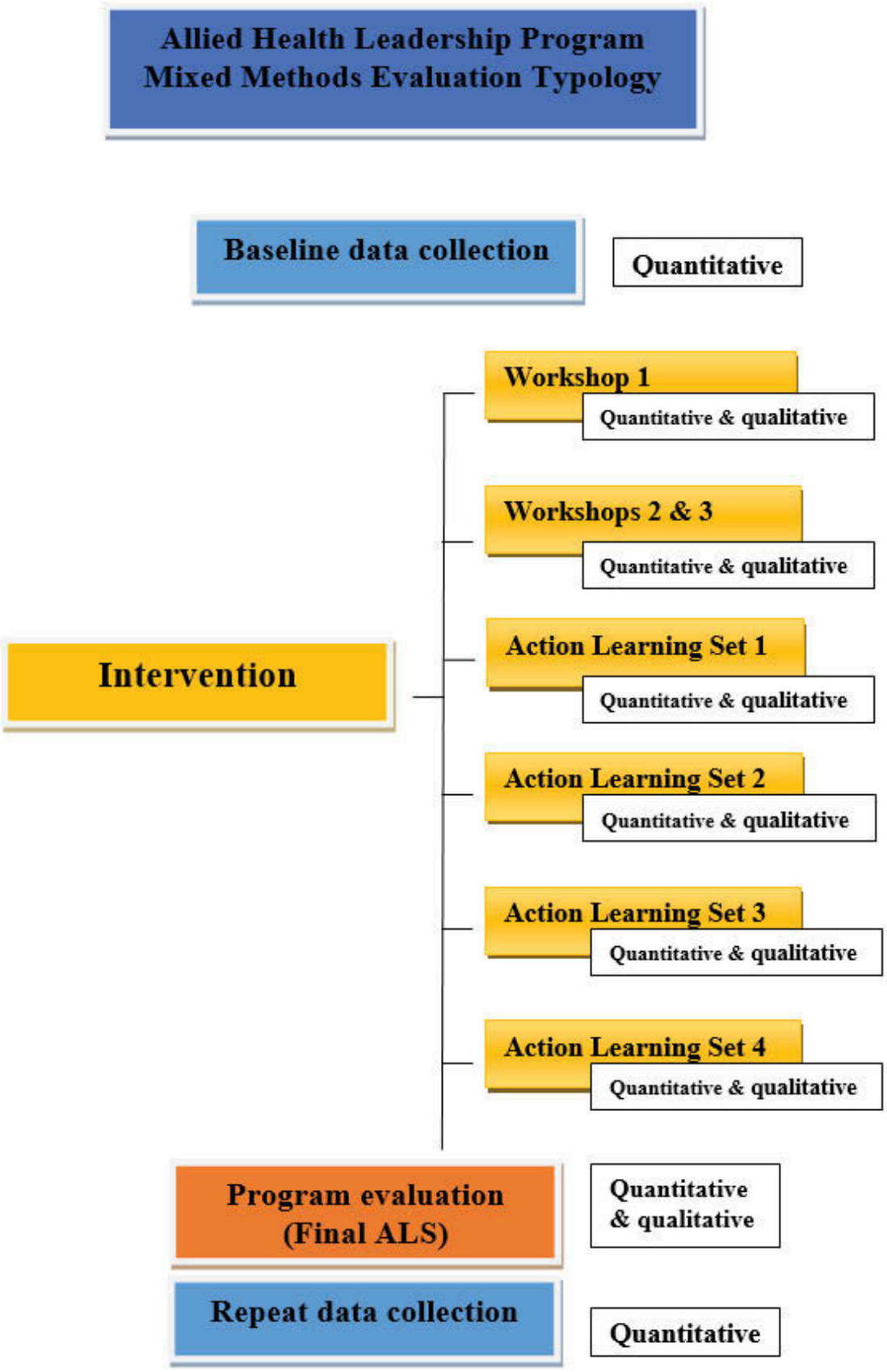

Figure 6.6 Mixed methods design typology

Pre- and post-statistical analysis of individual leadership capabilities of control and intervention group participants was undertaken using with the Multifactor Leadership Questionnaire (Bass & Avolio, 2004) in accordance with formal administration requirements. Descriptive statistics were collected to evaluate participant and program outcomes. Results were analysed for statistically significant changes between the control and intervention groups as well as the differences within each group over time.

Qualitative data analysis was undertaken using demographic information collected at baseline and after the program, as well feedback collected from participant questionnaires. Other outputs, such as completion of a person-centred project and related workplace and clinical outcomes, were also collected as part of findings. Thematic analysis was organised using NVivo 10 software (QSR International, 2012).

As described in Chapter 5, the leadership development process utilised PAR methodology as part of qualitative program evaluation in relation to the effectiveness of the leadership development program. Cycles of critical reflection involving the study participants were undertaken throughout the program as part of the PAR process throughout the study. These reflections were documented after each session and themed as part of qualitative evaluation.

6.13 Measures of quality improvement

To determine the current context of allied health involvement with quality improvement, as well as whether the program influenced the number of quality improvement activities undertaken, this research reviewed allied health clinician involvement with quality improvement activities. This was achieved by analysing the number of quality improvement projects completed by allied health personnel over the 12-month period prior to the Allied Health Leadership Development Program, compared with the number of projects following the program.

As noted in 6.11.1, measurement of study participants' attitudes in relation to quality and safety before and after the leadership program was also examined.

6.14 Ethics

All aspects of this study complied with the requirements outlined in the National Statement on Ethical Conduct in Research involving Humans stipulated by the National Health and Medical Research Council (NHMRC) (National Health and Medical Research Council, 2015). Ethics approval for this study was obtained from the South Eastern Sydney Local Health District and University Human Research Ethics Committees (see Appendix 6).

6.14.1 Consent and information to participants

As outlined in 6.7.6, all allied health personnel involved with the study were given verbal and written information about the study, including the possibility of their assignment to a no-treatment group for the first year.

Signed consent was obtained from all personnel who participated in this study, with participants advised that should they wish to withdraw from the study once it has started, they could do so at any time without having to give a reason and without prejudice.

Prior to consent being obtained, the author met with each potential study participant to outline the study design, their role and the likely time commitment. This was designed to provide sufficient information for potential participants to make an informed, reasoned decision about the potential benefits and inconvenience of participation.

6.14.2 Risks to participants

According to the NHMRC ethical statement, the study was considered to be a 'low risk' study. The NHMRC defines a low risk study as one where the predicted risk to participants is considered to be one of discomfort (see p.8, National Health and Medical Research Council, 2015).

6.14.3 Confidentiality

Management of all data collected from this research was in accordance with the guidelines stipulated by the NHMRC (National Health and Medical Research Council, 2015), and the University and SESLHD Human Research Ethics Committees.

As described, once identified as a suitable candidate for inclusion in the research, each subject was assigned a study enrolment number (project code) to be used as their pseudonym. This allowed identification of individual participants whilst maintaining confidentiality.

Online survey data submitted by participants required the participants to be identified by name, prior to their data being coded. By signing the written consent and completing the surveys, it was considered that the individual understood the purpose of the survey data collection and consented to the data collection as part of the research. Access to the online survey information was password protected. Other documents with participant names, such as the completed consent forms, were stored separately under locked conditions.

Data collected following workshops and action learning sets were completed anonymously. No individual participants were identified, with responses collated and themed for analysis as part of this study. All completed forms were stored under locked conditions.

All computer-stored data were password protected and accessible only by the researcher. Once seven years have has elapsed, all paper data sheets will be shredded and disposed of using confidential waste receptacles. All computer files will also be deleted.

Any data arising from this study that is used in publications will be aggregated and therefore anonymous. Where individual participants are quoted, they shall be referred to by their coded pseudonym. No individual will be identified in any published paper.

Participants were advised that any information obtained in connection with the study that could potentially be identified with them or their allied health discipline will remain confidential and will be disclosed only with their permission or as required by law.

6.15 Implementation plan

The study was undertaken in a number of phases, as illustrated in Figure 6.7.

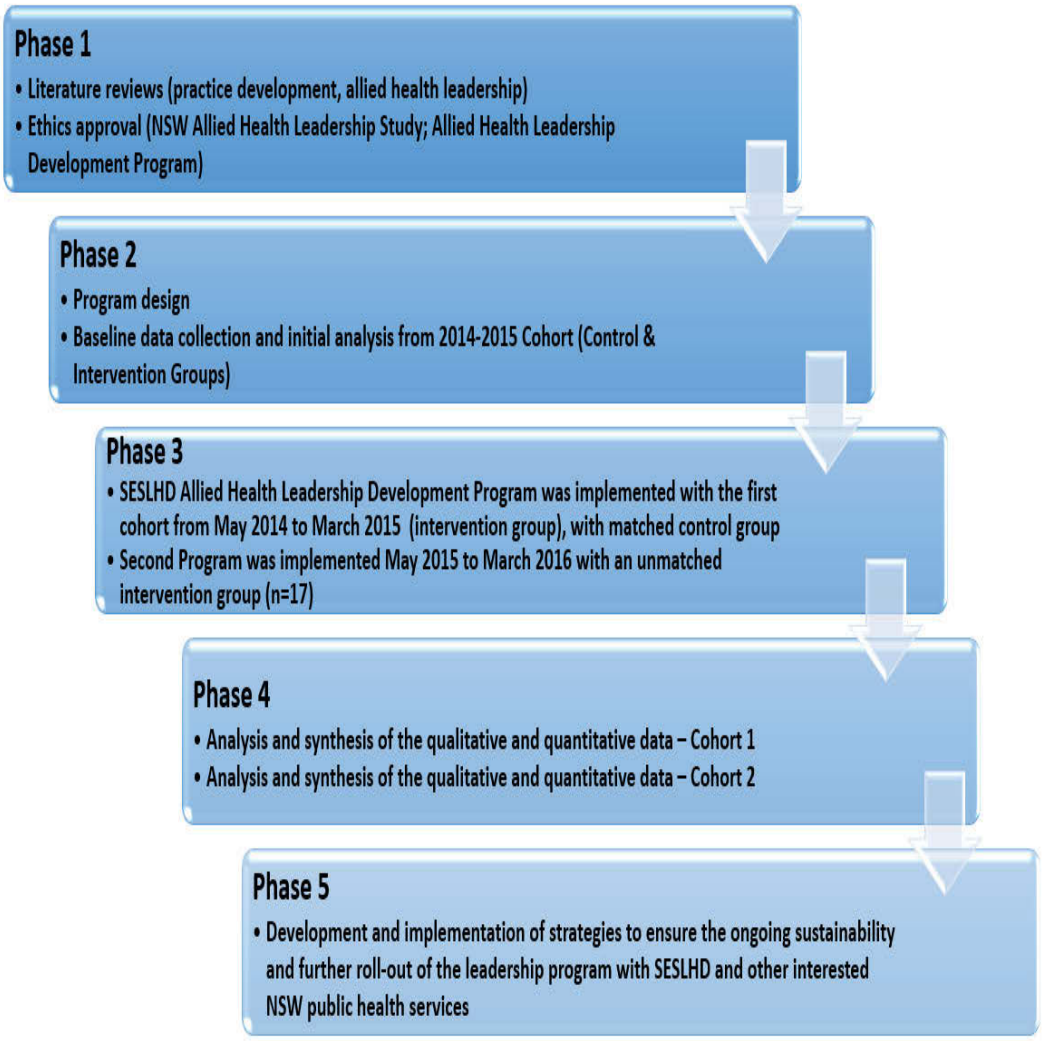

Figure 6.7 Phases of the study

6.16 Conclusion

This chapter sought to provide a detailed account of the methodology and methods used in this study, with an in-depth account of the survey instrumentation, survey responses and results. The next chapter will present an account of the results arising from the data analysis.

Chapter 7: Results of the SESLHD Allied Health Leadership Development Program

7.1 Introduction

This chapter discusses the results obtained from the SESLHD Allied Health Leadership Development Program. It provides an overview of the data collection process for the study, along with a description of program participants and the demographic profiles of each of the study cohort groups. Qualitative results and quantitative results arising from the study are also presented, including the results from a randomised control trial. The chapter concludes with a summary of how the quantitative and qualitative results are integrated as part of the complementarity mixed methods approach to form the basis for program evaluation.

7.2 Collection of baseline data

This section provides a detailed discussion of the data collection process. A schema of the data collection process from 2014 to 2016 across the two cohorts along with participant allocation and participant numbers is provided in Figure 7.1.

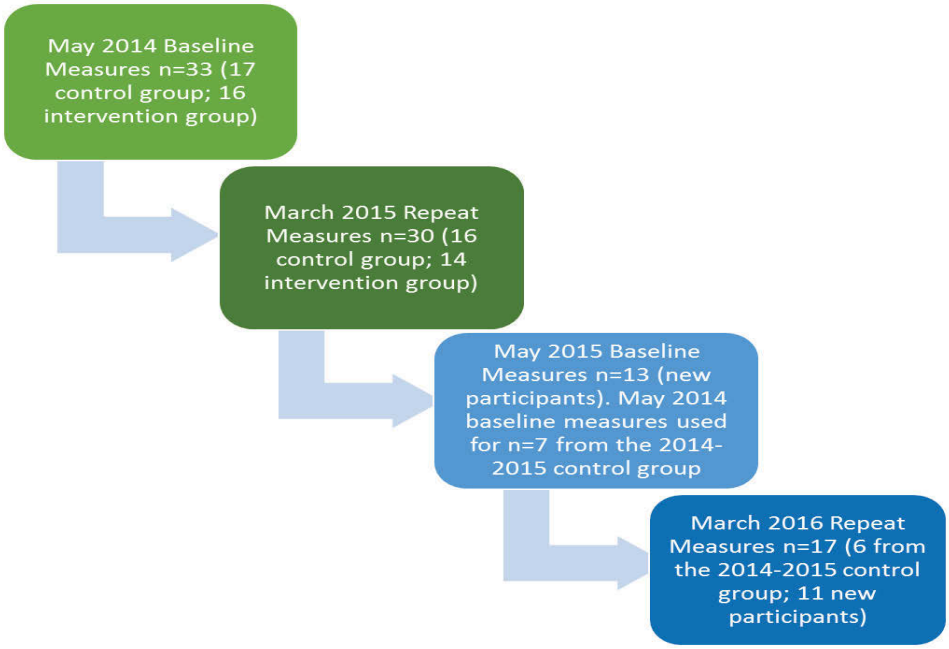

Figure 7.1 Schema of the data collection process

7.2.1 Collection of baseline data: 2014–2015 cohort

Baseline data collection pertaining to the 2014–2015 Allied Health Leadership Development Program (Cohort 1) commenced in April 2014 and was completed in May 2014. At baseline, 33 participants were enrolled in the study and all research participants (100%) completed the baseline survey. A repeat of the baseline measures occurred in March 2015, where all 30 remaining participants (100%) completed the repeat surveys.

There was a loss of three subjects from the 2014–2015 study Cohort 1. Of those who left the study, two commenced maternity leave and one left SESLHD for a position in another Local Health District. Therefore, no data from these three participants were included in the 2015 data analysis.

Of the people who completed the repeat baseline measures, seven (44%) from the control group went on to enrol in the leadership program in 2015–2016. The baseline measures for these seven participants were considered to be the measures that were collected in 2015, as this was most representative of their status immediately prior to commencing the leadership program.

Of the nine people from the original control group who did not participate in the 2015–2016 program, three (19%) commenced maternity leave, two (13%) were not supported by their manager to undertake the program, two (13%) left the organisation, one initially enrolled in the program then withdrew before the program commenced, and one did not wish to participate in the program.

7.2.2 Collection of baseline data: 2015–2016 cohort

Baseline data collection for the 2015–2016 Allied Health Leadership Development Program commenced in April 2015 and was completed in May 2015 by all 20 participants (100%). Repeat measures for the 2015–2016 program participants were obtained from 100% of remaining 17 participants in March 2016.

The number of people in the 2015–2016 cohort who completed the repeat measures was 17, including six who were in the control group from the 2014–2015 study cohort. One of the original seven control group participants from the 2014–2015 study withdrew from the

program due to ill-health. Two of the new nominees withdrew from the program, one who resigned from her position in SESLHD and one who did not wish to complete the program.

7.3 Demographics: Characteristics of study participants

This section compares the demographic information of the control and intervention groups from the 2014–2015 cohort at baseline. A summary is also provided in relation to the 2015–2016 cohort (non-matched intervention group).

The baseline data from all participants in the program is then presented in summary form. This outlines the characteristics of study participants across 2014, 2015 and 2016 – that is, inclusive of both study cohorts.

7.3.1 Characteristics of allied health participants: 2014–2015 program

The demographic characteristics of the 2014–2015 cohort when compared as control and intervention groups are outlined in Table 7.1. This excludes data from the three individuals who left the study. It is noted that percentages have been rounded up, therefore some totals do not equal 100.

Results show that most participants in both the control and intervention groups were female, with each group having one male participant. Age demographics show a similar spread in ages, although there were two additional 30–39-year-olds in the control group. Due to the stratified randomisation process, there were comparable numbers of people per site and per discipline represented in each group. Years of experience in their jobs and professional gradings (reflecting a person's organisational seniority) were also similar across groups.

Results indicate that the control and intervention groups from the 2014–2015 study cohort were appropriately matched for gender, age, discipline, site, grading and years of experience, indicating that comparison across the two groups will be representative.

Table 7.1 Summary: Characteristics of 2014–2015 allied health participants per group

VARIABLE	Control Group (n=16)	Percent	Intervention Group (A&B) (n=14)	Percent
Gender				
Male	1	6	1	7
Female	15	94	13	93
Age (years)				
20–29 years	5	31	5	36
30–39 years	5	31	3	21
40–49 years	6	38	6	43
Site				
Sutherland Hospital	3	19	1	7
St George Hospital	4	25	2	15
Calvary Healthcare	2	13	2	15
Prince of Wales Hospital	6	38	6	43
Sydney/Sydney Eye Hospital	0	0	1	7
War Memorial Hospital	1	6	1	7
Albion Street Centre	0	0	1	7
Professional discipline				
Occupational therapy	4	25	4	29
Physiotherapy	3	19	2	15
Social work	3	19	2	15
Speech pathology	2	13	1	7
Dietetics	2	13	1	7
Podiatry	1	6	1	7
Orthoptics	0	0	1	7
Psychology	0	0	1	7
Pharmacy	1	6	1	7

Professional Grading				
Level 2 (base grade)	2	13	1	7.
Level 3 or 4	13	81	12	86
Level 6 or above	1	6	1	7
Job experience (years)				
Up to 5 years	4	25	4	29
6–10 years	4	25	4	29
10–20 years	6	38	5	35
20–30 years	2	13	1	7

7.3.2 Characteristics of allied health participants: 2015–2016 program

The demographic characteristics of the 2015–2016 cohort are summarised in Table 7.2. Data shows a similar spread of characteristics in relation to gender and grading when compared with the intervention group from Cohort 1. This group had more 30–39-year-olds and people who had worked 6–10 years, but had fewer sites represented and more physiotherapists as part of the group.

Table 7.2 Summary: Characteristics of 2015–2016 allied health participants

VARIABLE	Study Group (n=17)	Percent
Gender		
Male	2	12
Female	15	88
Age (years)		
20–29 years	4	24
30–39 years	7	41
40–49 years	5	29
50–60 years	1	6

Site		
Sutherland Hospital	2	12
St George Hospital	3	17
Calvary Healthcare	1	6
Prince of Wales Hospital	10	59
War Memorial Hospital	1	6
Professional discipline		
Occupational therapy	5	29
Physiotherapy	4	24
Social work	2	12
Speech pathology	2	12
Dietetics	3	17
Orthoptics	1	6
Professional Grading		
Level 2 (base grade)	1	6
Level 3 or 4	15	88
Level 6 or above	1	6
Job experience (years)		
Up to 5 years	0	0
6–10 years	8	47
10–20 years	7	41
20–30 years	2	12

7.3.3 Combined baseline data: 2014–2015 and 2015–2016 cohorts

Combined results from across all study participants in relation to study demographics has been summarised in Table 7.3. This data show that there were minimal differences across the two intervention group participants. More comprehensive and detailed data in relation

to the demographic profiles of study participants at each specific stage of the study are presented in Appendix 7.

Table 7.3 Demographics of study participants

DEMOGRAPHIC ELEMENT	SUMMARISED DESCRIPTION OF FINDINGS
Gender (%)	In the 2014 and 2015 cohorts, approximately 94% of participants were female. This is higher than the national average for a number of registered health professions (Australian Institute of Health and Welfare, 2013) and in comparison to a study undertaken in Victoria where the percentage of females in a 2013 workforce study was approximately 85 per cent (Department of Health, 2013). The 2016 cohort was closer to the national average at 88 percent.
Age (in years)	Results illustrate that the 2014 cohort were aged between 20 and 49 years of age. There were no participants over 50 years. With the new participants in the 2015 cohort, a similar spread across aged groups were found, with the exception that there was one participant aged between 50–60 years.
Place of Work	There was a spread of participants from across seven service locations in SESLHD. As expected, most participants were from the large tertiary hospitals (St George Hospital and Prince of Wales Hospital).
Professional discipline	There were nine allied health professional disciplines represented in the study cohort. In the SESLHD context. All major allied health groups were represented. Occupational therapy had the largest number of participants, followed by physiotherapy and social work. Orthoptics and psychology had the smallest number of participants. In SESLHD in 2017, social work and physiotherapy had the highest number of employees (n=225 and n=194 respectively), followed by occupational therapy (n=161). Pharmacy employs the next largest number of employees (n=118). Clinical psychology and psychology also employ large number of personnel (n=93 and n=72), followed by dietetics (n=65), speech pathology (n=57), and then orthoptics (n=18) and podiatry (n=18) (SESLHD, 2017). With the exception of pharmacy, the spread of allied health discipline representation in this study was considered reasonable.

Employment status	The majority of study participants across all years were fulltime employees of SESLHD (range 85–94%). While there were some part-time employees who undertook the study, specific consideration may need to be given to this group in future programs to enhance accessibility.
Professional grading	Across both cohorts, the majority of study participants were in a senior position at the commencement of the program. There were four Level 2 graded allied health professionals at the commencement of the 2014 program and two at the commencement of the 2015 program. These roles traditionally do not supervise other allied health professionals, although may supervise allied health assistants and are expected to supervise student clinicians.
Number of staff supervised	Over 90% of participants supervised other personnel across both study cohorts (1 and 2), with 67% supervising three or more staff. Approximately 18% of participants supervised more than 15 staff.
Length of time working in the NSW Health system	In the 2014 group, the majority of participants had worked in the public health system for five years or more (72%). One participant had worked for the public health system for less than 12 months. Findings were similar for the 2015 cohort, with the exception that there were no participants who had worked in the public health system for less than 12 months.
Length of time in current role	In the 2014 cohort, just over half of the participants had worked in their present role between one and five years. Almost a quarter (24%) had worked in their role for five to 19 years. Two participants (6%) had worked for greater than 20 years in their current role. In the 2015 cohort, similar results were found, with just over half of the participants having worked in their present role for between one and five years. Approximately 20% of participants had worked in their role for five to 19 years or for less than 12 months. One had worked for greater than 20 years in their current role.
Year of graduation	A review of when participants graduated with their first health-related degree, using information taken at baseline, suggested a spread of experience across program participants. Note – this question was not repeated in the 2016 survey.
Time spend in direct patient care	Two of the participants were in full-time management roles and did not provide any direct patient care. This indicated that 94% of participants undertook some direct patient care as part of their role.

7.3.4 Leadership courses attended in the past five years

Feedback from 2014 participants at baseline (n=33) indicated that three had attended the Effective Leadership/Clinical Leadership Course conducted in SESLHD; three had undertaken health coaching training and three had undertaken training in clinical supervision in the past five years. There were a range of other miscellaneous courses attended by participants (n=12). Twelve of the participants (30%) had not attended any leadership courses in the past five years.

Repeat feedback from the 2014–2015 cohort participants (n=30) indicated that 10 participants had not attended any further leadership training, 16 had undertaken the Allied Health Leadership Development Program and four had attended other training (for example, accelerated implementation methodology; clinical supervision training) in the past year.

The new participants who joined the program in 2015 (n=13) had attended the SESLHD Clinical Leadership Program (one person); in-house coaching and facilitation training (two people) and clinical supervision training (one person) in the past five years. Eight of the 15 new people (53%) had not attended any formal leadership training in the past five years.

7.4 Qualitative results

Qualitative data were collected through questionnaires completed by intervention group participants in the 2014–2015 cohort and by participants in the 2015–2016 cohort immediately after each workshop and ALS. The questionnaires were used to collect participant feedback and suggestions about elements of the session. They were also asked to describe key learnings and perceptions about their progress in the program as well as answer questions about the program itself.

The results of qualitative evaluation are discussed below, commencing with a discussion of findings for the intervention group and control group (where relevant) from the 2014–2015 cohort of the SESLHD Allied Health Leadership Development Program. This is followed by presentation of data obtained from the 2015–2016 cohort. Thematic analysis of these data was undertaken using NVivo 10 software (QSR International, 2012).

7.5 Qualitative evaluation of the leadership program

As part of the leadership program, participants were invited to provide feedback about aspects of the program. Findings from the two program cohorts will be discussed separately; however, one common finding across both groups was the increase in leadership confidence reported participants when asked "*In what way has your learning affected you most?"* For this question, increased confidence was reported by 64% (n=9) of participants in the 2014–2015 group and by 53% (n=9) in 2015–2016 group. This provides clarity in relation to one of the benefits of the program for participants.

7.5.1 Qualitative evaluation of the leadership program: 2014–2015 cohort (Intervention Group)

Qualitative evaluation demonstrated that the SESLHD Allied Health Leadership Development Program was very well received by intervention group participants, with 100% of participants rating the program as 'very good' or 'excellent' on a five-point Likert scale. When evaluating the session after each of the workshop and ALS, all participants (100%) 'agreed' or 'strongly agreed' on a five-point Likert scale that the sessions were of high quality, relevant and interesting.

Intervention group participants were invited to evaluate the program overall at the final ALS. When asked the most useful aspects of the program in their current role, learning about leadership, practice development and facilitation along with the ALSs were rated most highly. Examples of participant responses include:

> The facilitation questioning and action learning sets. The individual coaching was invaluable. [Participant 8 2015]

> Reflecting on myself as a leader and utilising tools and skills I've learned to further develop myself as a leader. Developing a greater understanding of leadership (especially transformational leadership styles). Learning about practice development and how it adds a greater depth and dimension to improving quality and safety of care through being person-centre and guiding sustainable change and development in teams and individuals. [Participant 2 2015]

Participants reported enhanced skills in leading self and others through mechanisms such as critical reflection and facilitation, and all participants (100%) reported the program

assisted their personal development as a leader, describing benefits such as improved awareness, better listening, and confidence.

> Review of team's values and ways of working, considered project from different aspects e.g. effect of project on staff/clients rather than just outcomes. [Participant 9 2015]

> Prompted us to do a practice development project which created a culture change. I practised using facilitative skills and enabling questions. We now have agreed team values and a team vision, therefore a common purpose. [Participant 10 2015]

When asked about whether the program had influenced patients, respondents reported a greater awareness of the need for person-centred care characterised by empowering patients, better team communication and use of patient-focused measures in relation to service improvement.

> Yes - giving clients more control over their choices and treatment. Team now very conscious of trying to improve our practice and adhere to team values and vision. [Participant 11 2015]

> We've improved a system for providing equipment to ward-based patients - ensuring effective and efficient care. [Participant 1 2015]

> Our team culture has improved, therefore (hopefully) our patient care has improved. Our communication has improved with other teams - I'm 'stepping up' more often which I think aids patient care. [Participant 6 2015]

When questioned about whether the program had influenced others in their teams, participants reported both team and individual outcomes. For teams, these included improved communication; more widespread contribution from team members; closer connections across the team; greater team satisfaction; and enhanced person-centred care.

> Encouraged the team to become more reflective and consider good patient care to be more than just outcomes and more about patient journeys and satisfaction too. [Participant 2 2015]

> Positive feedback that the team is working effectively and that people are 'happy' at work. [Participant 4 2015]

For individuals, outcomes included being approached more for advice and increased reflection on the opportunities for innovation.

> I feel people now look to me to lead. I am approached to consult on cases and issues. [Participant 3 2015]

When asked for suggestions to improve the program, three participants suggested introducing structures to encourage networking outside of the organised meetings, such as email, webinars or meetings at their sites. One participant recommended additional practical application of some of the theory; another suggested additional role-play or opportunities to practice.

Overall, participants rated the leadership program highly. Feedback suggested that the allied health participants valued an allied health specific leadership program and related well to the person-centred principles and approaches used in practice development.

> Have thoroughly enjoyed doing this course and having the opportunity to actually put into practice what I have learned, while I am learning it, to consolidate my learning. This has by far the most effective course I have ever done for this reason. [Participant 10 2015]

> Thank you for helping me unleash my inner leader. [Participant 5 2015]

7.5.2 Qualitative evaluation of the leadership program: 2015–2016 cohort

Like the 2014–2015 intervention group, the SESLHD Allied Health Leadership Development Program was very well received by 2015–2016 group participants, with 100% of participants rating the program as ‘very good’ or ‘excellent’ on a five-point Likert scale. When evaluating the session after each of the workshops and ALSs, all participants (100%) ‘agreed’ or ‘strongly agreed’ on a five-point Likert scale that the sessions were of high quality and interesting. Ninety-four per cent (n=16) of participants ‘agreed’ or ‘strongly agreed’ that the sessions were relevant (‘neutral’, n=1).

Participants in this group also reported the program benefitted their development as a leader. When evaluating the program overall at the final ALS, this group of participants reported that the most useful aspects of the program in their current role were learning about the process of practice development, facilitation and effective questioning as well as the practice afforded by the ALS. Participant responses included:

> Learning about facilitation, understanding leadership, understanding about person-centred care. Understanding how hard it is to engage people. My awareness of myself and others working as part of a team. [Participant 13 2016]

> Encouraging thinking about the process -stages of change, engagement etc. Practice applying enabling questions in action learning sets. [Participant 9 2016]

As with the 2014 intervention group participants, improved leadership skills through critical reflection and facilitation were reported. All participants (100%) reported the program furthered their personal development as a leader, describing benefits such as a deeper understanding of relationships, enhanced confidence and more structured reflection as a leader.

> Seeing others as the solution – not feeling weighed down with burdensome thoughts of I need to do all the work for a change to be made. [Participant 3 2016]

> Confidence was built through having the knowledge of the theory, then apply it in the project. Confidence is essential for me. [Participant 12 2016]

When questioned about how the program had influenced patients, this group reported an awareness of the need to improve in this area, with some steps being taken to involve patients more, to shift ownership and decision-making to the patient and to improve processes for patients.

> Being part of the outpatient department for more than 13 years made me realise that I am still able to make positive changes in my clinical area. This learning process has made me rethink my interactions with my patients and how 'person-centred care' has help me look at how patients can be part of their management plans. [Participant 15 2016]

However, some were still on the journey to improve this area within their teams:

> It's getting there … hopefully we are in the initial stages of creating a positive change for our clients; putting their experience first. [Participant 1 2016]

When asked about whether the program had influenced others in their teams, this group reported that their teams are more engaged, have stronger relationships, better

communication, cohesion and unity as well as greater confidence to share ideas and opinions.

> More engagement – people feel like they are being listened to and that they can influence change. [Participant 10 2016]

> By using value classification technique we are more together, on the same page and everyone knows the expectation of their team. [Participant 16 2016]

Individual program outcomes included feeling that they are able to better support others in their teams and that there was greater flexibility in how they managed issues and other staff.

> Because I'm more conscious about stopping and listening before talking, they are more confident to raise novel ideas and strategies. [Participant 11 2016]

When asked for suggestions to improve the program, ideas included more activities and learning sets, adjusted timing in relation to the day of the week of the program and introducing ways to encourage people to report on progress of their project. One person also reported that they did not find the ALS useful.

Overall, this group of participants also gave the leadership program a high overall rating. Participant feedback reinforced the value an allied health specific leadership program, underpinned by leadership theory and practice development.

7.6. Participants' person-centred quality project

As part of participation in the leadership program, participants were required to co-design, implement and evaluate a person-centred quality project with their team to be presented at a 'celebration day' event at the conclusion of the program. Participants were encouraged to use practice development approaches, such as *Claims, Concerns and Issues* and *Values Clarification* as enablers of project development with their teams. As mentioned previously (Section 5.6.8), the task required that program participants facilitate their team to undertake the project, rather than the individual leader doing the project themselves.

At the two celebration days (March 2015 for the 2014–2015 intervention group cohort and March 2016 for the 2015-2016 cohort), participants were asked to provide a brief

discussion of their project, including a description of their team, their case for change, a project description and project outcomes, along with their key learnings and reflections on their leadership journey. Successful completion of the Allied Health Leadership Development Program was acknowledged and recognised at this event.

Each of the days were an occasion for reflection and celebration for participants, with a range of profound insights and learnings being shared. The cohesiveness of each group was evident as they each supported each other and provided feedback and encouragement for the future journey.

Each of the celebration days showcased a diversity of projects developed by the local teams. These included clinical projects, team development projects and projects that improved local processes. A list of the projects is provided in Table 7.4.

Table 7.4 List of allied health projects

2014–2015 Intervention Group Participants	Name of Project
1	Caring about pressure care – Using practice development to improve processes to prescribe and provide pressure care cushions
2	Improving in-patients' engagement with rehabilitation through animal visits
3	Getting a grip … on tenodesis assessments
4	A team approach to falls prevention
5	Medication information for post-operative patients at SSEH
6	Super supervision!
7	Developing workplace culture in an allied health outpatient setting
8	Cultivating working relationships of the Acute Rehab Team
9	'Strong and Steady' – a new physiotherapy program and team approach
10	Improving The Sutherland Hospital (TSH) Community Social Work Services via a Social Work Team Review Process
11	Thinking outside the sustagen cupboard – the benefits of a different approach.
12	Speech pathology student preparedness for learning
13	Partnering with patients to improve podiatry services

2015-2016 Participants	Name of Project
1	Improving the physiotherapy service at TSH
2	Falls prevention – a multidisciplinary approach
3	Ready-Set-Go!
4	Joining Forces – Establishing the state-wide outpatient rehabilitation service
5	Improving the aged care acute OT service: A review of our complex discharge planning processes
6	Reflecting on the ART service
7	'We need to talk': teamwork in outpatient rehabilitation.
8	Improving staff knowledge and patient access to local transport options
9	Using WORRDS wisely – working on revising our dietitian documentation standards
10	What are we 'weighting' for? A practice improvement project evaluating the weighing of patients in the POWH Spinal Injury Unit
11	Evaluation of the Dietetic Quality Improvement Program at St George and Sutherland Hospitals
12	Vision progress chart
13	Reflective practice in clinical supervision
14	Medications and dysphagia: A crushing issue
15	Disproportionate androgynous androids – Revamping the handouts for SGH hand therapy

7.7 Qualitative evaluation of coaching

Access to individual coaching was made available to half of the intervention group in the 2014–2015 cohort and to all program participants in the 2015–2016 cohort.

Eight of the original 16 participants in the intervention group received four sessions of individual coaching from the author as part of the leadership program. Fourteen of the 17 participants elected to receive four sessions of individual coaching as part of the 2015–2016 program. Coaching was undertaken at the participant's place of work.

Feedback from those who received coaching was very positive, as reflected in the post-program questionnaires. Participants reported that having an opportunity to discuss their project and other issues in a confidential, supportive environment was beneficial and added value to the program. They reported that they attained greater insight into themselves as leaders and found enhanced self-efficacy in their leadership roles.

An issue that became evident from the coaching sessions was the lack of leadership self-care evident in many of the coaching conversations. It was clear that a number of the study participants who received coaching had not previously engaged in formal coaching or considered their personal needs as a clinician and a leader. While leadership self-care is discussed as part of the program workshops, coaching provided an avenue to explore and address this issue with a number of individuals.

7.8 Review of quality and safety outcomes

As part of the surveys, all participants were asked to list any quality activities they had commenced and/or completed over the past 12 months. Results are presented in Table 7.5.

Table 7.5 Quality and safety outcomes

	At Baseline: Number Quality Projects Commenced	At Baseline: Number Quality Projects Completed	TOTAL Number of Projects at Baseline	Repeat: Number Quality Projects Commenced	Repeat: Number Quality Projects Completed	TOTAL Number of Projects after the Program
Control Group (2014 and 2015 measures)	38	20	**58**	29	17	**46**
Intervention Group (2014 and 2015 measures)	28	15	**43**	31	22	**53**
2015–2016 Cohort	27	13	**40**	41	22	**63**

Results show that there was a high level of quality activity by members of the control group prior to the implementation of the leadership program, with 58 projects reported as

commenced or completed. When the measures were repeated, the control group reported 12 fewer projects (n=46), but were still undertaking more projects than their intervention group counterparts were at baseline.

Intervention group participants and members of the 2015–2016 cohort reported similar numbers of quality projects commenced or completed as baseline. Both cohorts reported an increased number of projects following the program (increase of n=10 for the 2014–2015 intervention group and n=23 for the 2015–2016 group). This suggests that following the program the participants were more likely than those in the control group to commence and complete quality activities.

7.9 Organisational outcomes

As discussed in Chapter 6, four levels for evaluation of training programs have been proposed by Kirkpatrick: *Level 1* – Reaction to the training; *Level 2* – Learning measures; *Level 3* – Measures of Behaviour; and *Level 4* – Results (Kirkpatrick & Kirkpatrick, 2006; Steensma & Groeneveld, 2010). The experimental design with a control group aspect of the leadership program has enabled program evaluation at each of the four levels.

Results from levels 1 to 3 are described in the qualitative and quantitative sections of this chapter and include a high level of participant satisfaction with the program (Level 1); evidence of enhanced knowledge and learning (Level 2) and formal evidence of leadership outcomes (Level 3). The organisational outcomes at the fourth level of evaluation will now be described in terms of organisational impact, career outcomes, cost, and manager satisfaction.

7.9.1 Organisational impact

Impact is defined as whether the program has influenced the organisation through mechanisms such as improved activity, greater efficiency and enhanced satisfaction (Steensma & Groeneveld, 2010; McCallum et al., 2002; MacPhail et al., 2015).

As detailed in Table 7.5, over 30 quality projects were commenced or completed by SESLHD leadership program participants over the past two years. This illustrates an increase in focus on quality and safety by these individuals and their team, leading to better patient care and more efficient services.

In addition, the implementation of person-centred projects within the teams of the project participants has had a tangible and measurable effect on team culture and patient care, as evidenced by the data, measures and outcomes presented by program participants. A number of projects have progressed to be nominated for local SESLHD Innovation and Improvement Peak Awards.

7.9.2 Career outcomes

In the 2014–2015 cohort, repeat data analysis showed that 57% (n=8 of 14) of program participants reported that they had attained a more highly graded (promotional) position by the conclusion of the program compared with the position they were employed in at the commencement of the program. This compared with 6% of control group members (n=1 of 16) who reported attaining a higher position after the 10 months of the program.

In the 2015–2016 group, 47% (n=8 of 17) had attained a promotional position following the program. Results from the two program groups indicate that the program is effective in equipping allied health clinicians for more senior leadership roles.

7.9.3 Cost of the program

The direct costs of the leadership program were negligible as it was undertaken in-house by SESLHD employees during regular working hours. As is typically the case for allied health practitioners, the clinical roles of attendees were not backfilled while they were attending the program. This means that there was no financial cost to teams whose leaders attended the program.

All invited speakers who presented as part of the program were internal to or affiliated with SESLHD and therefore their involvement did not incur expense. This renders the program a viable and affordable option for the organisation.

7.9.4 Manager satisfaction

While managers of allied health participants were not asked to formally evaluate the allied health leadership program (only to rate the individual leaders through the MLQ), there were several instances where the line managers of program participants provided unsolicited feedback about the program. The excerpt below exemplifies the nature of this feedback and illustrates the usefulness of this program for managers in the context of allied health healthcare.

> Just a quick note to say thank you for the opportunity for occupational therapy @ [site] to participate in the Allied Health Leadership Project. It's such a fantastic opportunity for allied health and we as a department have really benefitted from the expertise and guidance you have been able to share with our emerging leaders. It has allowed us to build up a core of staff that are engaged and wanting to contribute to the bigger picture, it's fantastic.
>
> [In reflecting over a very difficult 12 months] – I think it's because the workload has really been shared with the M's, V's, G's etc. [program participants] of the department who have picked up extra responsibility and flourished that have allowed us to guide the department though the events of 12 months ago. So if you ever need support for the program I'd be happy to offer you ours. [Allied Health Discipline Manager]

7.10 Summary: Qualitative results

Qualitative data analysis was undertaken using demographic information collected at baseline and after the program was implemented, as well as using feedback collected from participant questionnaires. Qualitative results demonstrated that the overall program was well-received by participants and led to personal, team, patient and organisational outcomes.

7.11 Quantitative results

This section outlines the quantitative results obtained from the study, commencing with baseline data for the 2014–2015 cohort (control and intervention groups) followed by data from the 2015–2016 cohort (unmatched intervention group).

For the 2014–2015 study cohort, descriptive statistics were used to evaluate pre- and post-program differences between the control and intervention groups, as well as the differences within each group over time. Descriptive statistics were used to evaluate pre- and post-program differences within the 2015–2016 cohort over the period of the program. It is noted that the intervention group was divided into two groups (one group that received coaching and one that did not). Data were analysed for these groups as well.

For the 2014–2015 intervention group and the 2015–2016 cohort, analysis was also undertaken in relation to the leadership program workshop learning outcomes as well as outcomes from the ALS.

All levels of significance were calculated using IBM Statistical Package for the Social Sciences (SPSS) version 21 (SPSS, 2012). Between-group comparison data for the 2014–2015 cohort were analysed using the Kruskal-Wallis Test and the Mann-Whitney U Test. Within-group comparison data were analysed using the Wilcoxon Signed Rank Test. Significance levels for all measures were set at 5%.

7.12 Quantitative data from the 2014–2015 cohort (Cohort 1)

This section presents comparative data from the randomised control trial involving the control and intervention groups from the 2014–2015 phase of the study. Data were compared in two ways.

a) Between-group comparisons, where results from the control group were compared with results from the intervention group at the beginning of the study (at baseline) and after the Allied Health Leadership Development Program was implemented (repeat measures).

b) Within-group comparisons, where the results from the same group were compared with results at the beginning of the study (at baseline) and after the Allied Health Leadership Development Program was implemented (repeat measures).

This section also provides a comparison of outcomes for those from the intervention group that received coaching and those who did not receive coaching.

Results from the 2014–2015 study cohort (control and intervention groups) have been summarised in tables 7.6 to 7.13. Comparative results for the control and interventions groups from 2014–2015 cohort are summarised in tables 7.6 and 7.7 (Control and intervention group comparisons). Within-group comparisons (control group/control group; intervention group/intervention group) are found in tables 7.8 and 7.9.

Results from the control and intervention group comparisons followed by the within-group comparisons for the control and intervention groups from tables 7.6 to 7.9 are discussed below in relation to the three elements of Workplace culture, Workplace engagement and Leadership.

Table 7.6 Self-rating: Summary of across-group comparison control and intervention group's statistical data

SELF RATINGS: Control and intervention group comparison	Control Group Mean: *Baseline*	Interv. Group Mean: *Baseline*	Intervention Group versus Control Group – Self rating *Difference at Baseline (p-value)*	Control Group Mean: *Repeat*	Interv. Group Mean: *Repeat*	Intervention Group versus Control Group – Self rating *Difference at Repeat (p-value)*
Workplace Culture						
About their job	3.21	3.25	0.545	2.98	3.55	0.00
Person-centredness	3.28	3.15	0.045	3.16	3.37	0.006
Quality and safety	2.74	2.94	0.299	2.71	3.05	0.014
OVERALL	3.13	3.12	0.539	3.00	3.34	0.00
UWES						
Vigour	4.38	4	0.07	4.24	4.64	0.05
Dedication	4.63	4.49	0.302	4.65	5.01	0.08
Absorption	4.42	3.76	0.02	4.12	4.40	0.23
OVERALL	4.48	4.09	0.025	4.35	4.69	0.015
MLQ (5X-Short)						
Transformational Leadership elements						
Idealised Influence (Attributed)	2.67	2.66	0.49	2.73	2.95	0.11
Idealised Influence (Behaviour)	2.81	2.59	0.12	2.77	3.13	0.02
Inspirational Motivation	2.81	2.70	0.31	2.86	3.05	0.17
Intellectual Stimulation	2.86	2.93	0.38	2.89	3.25	0.03
Individualised Consideration	3.11	3.25	0.22	3.14	3.55	0.002
Transactional Leadership elements						
Contingent Reward	2.65	2.80	0.23	2.90	3.09	0.13
Management by Exception (Active)	1.71	1.88	0.26	1.52	1.91	0.07
Management by Exception (Passive)	0.88	0.84	0.42	0.76	0.57	0.17

Laissez-faire Leadership	0.69	0.57	0.26	0.58	0.5	0.31
Leadership Outcomes:						
Extra Effort	2.27	2.05	0.12	2.38	2.79	0.014
Effectiveness	2.86	2.94	0.34	2.98	3.25	0.04
Satisfaction	2.75	3.04	0.12	2.84	3.43	0.002

Table 7.7 Other raters MLQ: Summary of across-group comparison control and intervention group's statistical data

OTHER RATERS – MLQ **Control and intervention group comparison**	**Control Group Mean:** ***Baseline***	**Interv. Group Mean:** ***Baseline***	**Intervention Group versus Control Group – Other raters** ***Difference at Baseline (p-value)***	**Control Group Mean:** ***Repeat***	**Interv. Group Mean:** ***Repeat***	**Intervention Group versus Control Group – Other raters** ***Difference at Repeat (p-value)***
MLQ (5X-Short)						
Transformational Leadership elements						
Idealised Influence (Attributed)	3.34	2.97	0.02	3.10	3.07	0.44
Idealised Influence (Behaviour)	2.76	2.62	0.20	2.82	2.95	0.28
Inspirational Motivation	3.18	3.03	0.18	2.90	3.08	0.20
Intellectual Stimulation	2.96	2.87	0.33	2.85	2.94	0.33
Individualised Consideration	3.03	3.04	0.46	2.89	2.93	0.42
Transactional Leadership elements						
Contingent Reward	3.1	3.03	0.36	2.94	2.972	0.44
Management by Exception (Active)	1.84	1.92	0.35	1.62	1.87	0.17
Management by Exception (Passive)	0.68	0.58	0.27	0.77	0.72	0.42
Laissez-faire Leadership	0.39	0.35	0.38	0.63	0.39	0.08
Leadership Outcomes:						
Extra Effort	2.74	2.90	0.26	2.69	2.84	0.27
Effectiveness	3.45	3.51	0.36	3.21	3.19	0.47
Satisfaction	3.46	3.58	0.19	3.11	3.40	0.09

Table 7.8 Self-rating: Summary of within-group comparison statistical data

SELF RATINGS Within-group comparison	Control Group Mean: *Baseline*	Control Group Mean: *Repeat*	Control Group versus Control Group – Self rating *Difference Baseline and Repeat Measures (p-value)*	Interv. Group Mean: *Baseline*	Interv. Group Mean: *Repeat*	Intervention Group versus Intervention Group – Self rating *Difference Baseline and Repeat Measures (p-value)*
Workplace Culture						
About their job	3.21	2.975	0.04#	3.25	3.55	0.001*
Person-centredness	3.28	3.16	0.042#	3.15	3.37	0.00*
Quality and safety	2.74	2.71	0.831	2.94	3.05	0.285
OVERALL	3.13	3.00	0.005#	3.12	3.34	0.00*
UWES						
Vigour	4.38	4.24	0.182	4.0	4.55	0.006*
Dedication	4.63	4.65	0.753	4.49	4.94	0.022*
Absorption	4.42	4.17	0.210	3.76	4.31	0.021*
OVERALL	4.48	4.35	0.207	4.35	4.69	0.00*
MLQ (5X-Short)						
Transformational Leadership elements						
Idealised Influence (Attributed)	2.67	2.73	0.59	2.66	2.951	0.122
Idealised Influence (Behaviour)	2.81	2.77	0.59	2.60	3.13	0.004*
Inspirational Motivation	2.67	2.86	0.66	2.70	3.05	0.021*
Intellectual Stimulation	2.86	2.89	0.75	2.93	3.25	0.138
Individualised Consideration	2.67	3.14	0.56	3.25	3.55	0.046*
Transactional Leadership elements						
Contingent Reward	2.65	2.89	0.14	2.80	3.09	0.08
Management by Exception (Active)	1.71	1.52	0.23	1.88	1.91	0.81
Management by Exception (Passive)	0.88	0.76	0.48	0.84	0.57	0.10

Laissez-faire Leadership	0.69	0.58	0.20	0.57	0.5	0.47
Leadership Outcomes:						
Extra Effort	2.27	2.38	0.39	2.05	2.79	0.001*
Effectiveness	2.86	2.98	0.30	2.94	3.25	0.017*
Satisfaction	2.75	2.84	0.43	3.04	3.43	0.015*

***= higher mean score; #= lower mean score**

Table 7.9 Other raters MLQ: Summary of within-group comparison statistical data

OTHER RATERS – MLQ **Within-group comparison**	**Control Group Mean:** ***Baseline***	**Control Group Mean:** ***Repeat***	**Control Group versus Control Group – Other raters** ***Difference (p-value)***	**Interv. Group Mean:** ***Baseline***	**Interv. Group Mean:** ***Repeat***	**Intervention Group versus Intervention Group – Other raters** ***Difference (p-value)***
MLQ (5X-Short)						
Transformational Leadership elements						
Idealised Influence (Attributed)	3.34	3.10	0.02#	2.98	3.07	0.45
Idealised Influence (Behaviour)	2.76	2.82	0.80	2.62	2.95	0.10
Inspirational Motivation	3.18	2.90	0.04#	3.03	3.08	0.64
Intellectual Stimulation	2.96	2.84	0.18	2.87	2.96	0.51
Individualised Consideration	3.03	2.89	0.10	3.05	2.93	0.66
Transactional Leadership elements						
Contingent Reward	3.10	2.93	0.03#	3.03	2.97	0.79
Management by Exception (Active)	1.84	1.62	0.27	1.92	1.87	0.60
Management by Exception (Passive)	0.68	0.77	0.46	0.58	0.72	0.25
Laissez-faire Leadership	0.39	0.63	0.03*	0.35	0.39	0.69
Leadership Outcomes:						
Extra Effort	2.74	2.69	0.83	2.90	2.84	0.92
Effectiveness	3.45	3.21	0.015#	3.51	3.19	0.09
Satisfaction	3.46	3.11	0.01#	3.58	3.40	0.29

***= higher mean score; #= lower mean score**

7.12.1 Workplace culture

7.12.1.1 Control and intervention group comparison

Four groups of measures were compared in relation to workplace culture. These related to questions about participants' job, person-centredness, quality and safety and a combined score of all questions relating to workplace culture.

At baseline, there was no significant difference in baseline measures between the control and the intervention groups on three elements (about their job, quality and safety and overall workplace culture). There was a significant difference in baseline measures between the control and the intervention group for the person-centred care element, where the control group had a higher baseline score.

When these measures were repeated, statistically significant differences were found with all elements, where the intervention group demonstrated statistically significant higher repeat scores, including for the overall measure of workplace culture. This suggests improved workplace culture for the intervention group following the program.

7.12.1.2 Within-group results

Analysis of pre- and post-program measures of workplace culture relating to job and person-centred approaches for study participants in the control group found a significant difference in mean scores for baseline and repeat measures, with scores lower in repeat measures. There was no significant difference in mean scores on quality and safety measures.

Analysis of pre- and post-program measures of workplace culture relating to their job and person-centred approaches for study participants in the intervention group found a significant difference in mean scores for baseline and repeat measures, with scores higher in repeat measures. There was no significant difference in scores on quality and safety measures.

Analysis of pre- and post-program measures for study participants in the intervention group found a significant difference in the overall workplace culture scores between baseline and repeat measures, with mean scores higher in repeat measures. Analysis of pre- and post-test measures for study participants in the control group found a significant

difference in combined overall scores between baseline and repeat measures, with mean scores lower in repeat measures.

Results indicated that control group participants felt that workplace culture and person-centredness had diminished over time, whereas it had significantly improved for those in the leadership program. There was no statistically significant change in attitude in relation to quality and safety across either group.

7.12.2 Workplace engagement

7.12.2.1 Control and intervention group comparison

The UWES was used to formally evaluate workplace engagement. The three elements of vigour, dedication and absorption evaluated by the UWES tool were analysed separately. An overall measure of workplace engagement was also obtained.

There were significant differences in UWES baseline measures between control and intervention groups on one element (absorption) as well as the overall measure of engagement, where the control group demonstrated higher baseline scores. When these measures were repeated, statistically significant differences were found for one element (vigour) and for the overall measure of engagement, with the intervention group demonstrating higher repeat scores.

7.12.2.2 Within-group results

Analysis of pre- and post-test measures of the UWES for study participants in the control group found no significant difference in scores for baseline and repeat measures for the three elements of vigour, dedication and absorption or for the overall measure of engagement. Analysis of pre- and post-test measures for participants in the intervention group found significant difference in scores for baseline and repeat measures in all three UWES elements and for the overall measure of engagement.

Results suggest improved overall workplace engagement for the intervention group following the program, compared with the control group.

7.12.3 Leadership

7.12.3.1 Control and intervention group comparison

The MLQ data were analysed in two groupings – **self-rating** and **rating by others** (managers, subordinates, peers).

MLQ Self-rating: There was no significant difference in MLQ baseline measures between control and intervention groups on any of the 12 elements. When these measures were repeated, statistically significant differences were found in three transformational leadership elements and the three leadership outcomes, with the intervention group demonstrating higher scores.

MLQ Other rater: The MLQ ratings for study participants by other raters (managers, subordinates, peers) showed no significant difference in baseline measures between control and intervention groups for all but one element, with one transformational element rated higher in the control group. There was no significant difference in any MLQ measures between control and intervention groups by other raters on any of the 12 elements when repeat measures were undertaken.

7.12.3.2 Within-group results

MLQ Self- rating: Analysis of pre- and post-test measures of the MLQ for participants in the control group found no significant difference in scores for baseline and repeat measures for all 12 leadership elements. Analysis of pre- and post-test measures for participants in the intervention group found significant difference in scores for baseline and repeat measures on three of five transformational leadership elements (higher than baseline) and on all of the three leadership outcomes (higher than baseline).

MLQ Other rater: Analysis of pre- and post-test measures of the MLQ by other raters (managers, subordinates, peers) for participants in the intervention group found no significant difference in scores for baseline and repeat measures for all 12 leadership elements. However, significant differences were found in scores for baseline and repeat measures on five of the 12 measures for the control group, as follows: two transformational elements (decreased scores); one transactional element (decreased score); laissez-faire element (increased scores); two leadership outcome elements (decreased scores)

The MLQ results from the other raters showed that other staff (managers, peers and subordinates) perceived that some of the leadership skills of those in the control group had diminished over time.

7.12.4 Workshop and Action Learning Set outcomes

Prior to and following Workshop 1, intervention group participants were invited to rate their level of knowledge in four areas: practice development, leadership, quality and safety and facilitation. Results were statistically analysed and are presented in Table 7.10.

Table 7.10 Workshop outcomes: 2014–2015 cohort

WORKSHOPS 2014	Workshop 1 (n= 17)	Workshop 2 (n= 10)
Pre- Workshop Mean Score: Knowledge of Practice development	1.82	2.6
Post- Workshop Mean Score: Knowledge of Practice development	3.12	3.55
p-value	0.00	0.01
Pre- Workshop Mean Score: Knowledge of leadership	3.12	3.2
Post- Workshop Mean Score: Knowledge of leadership	3.77	4
p-value	0.005	0.016
Pre- Workshop Mean Score: Knowledge of quality and safety (workshop 1) and facilitation (workshop 2)	3.35	2.5
Post- Workshop Mean Score: Knowledge of quality and safety (workshop 1) and facilitation (workshop 2)	3.59	3.9
p-value	0.102	0.023

Results show that intervention group participants reported statistically significant higher levels of knowledge after each of the workshops in three topic areas – practice development (workshops 1 and 2), leadership (workshops 1 and 2) and facilitation (workshop 2). There was no statistically significant change in how participants rated their knowledge of quality and safety after workshop 1.

Before and after each ALS, participants were invited to rate their level of confidence in three areas: facilitation, asking enabling questions and presenting a topic as part of the ALS. Results of the 2014–2015 intervention group are outlined in Table 7.11.

Table 7.11 Intervention group self-report of levels of confidence: ALS, 2014–2015 cohort

ACTION LEARNING SETS 2014-2015	ALS 1 July (n= 13)	ALS August (n= 12)	ALS September (n= 8)	ALS October (n= 7)
Pre-ALS: Mean Score: Confidence with facilitation	2.69	2.75	3.56	3.21
Post-ALS: Mean Score: Confidence with facilitation	3.38	3.25	4.06	3.93
p-value	0.007	0.034	0.038	0.023
Pre-ALS: Mean Score: Confidence with questioning	2.89	2.58	3.56	3.29
Post-ALS: Mean Score: Confidence with questioning	3.31	3.42	4.06	3.79
p-value	0.062	0.004	0.038	0.059
Pre-ALS: Mean Score: Confidence with presenting	2.62	3	3.5	3.5
Post-ALS: Mean Score: Confidence with presenting	3.23	3.71	3.94	3.93
p-value	0.005	0.007	0.059	0.083

Findings illustrate that intervention group participants reported statistically significant higher levels of confidence in the three areas of facilitation, questioning and presenting after each of the ALSs, with the exception of ALS 1 and ALS 4 in the area of effective questioning and ALS3 and ALS 4 in the area of presenting on a topic.

7.12.5 Intervention group: Coaching versus no coaching

Data were analysed to determine whether there were differences in outcomes between intervention group participants who received coaching (n=7) and intervention group

participants who did not receive coaching (n=7). Noting that numbers were small in each group, workplace culture, workplace engagement and self-ratings and others rating of leadership data were analysed. These results are summarised in tables 7.12 and 7.13.

There were similar results in relation to the degree of change in leadership ratings between those who received coaching and those who did not, with three MLQ elements (one transformational, one transactional and one leadership outcome) showing differences for those who received coaching compared with two elements (one transformational and one leadership outcome) for those who did not. In line with previous within-group comparative findings, there were no significantly significant changes in how others (managers, subordinates, peers) rated either group.

Results for workplace culture were better in the non-coaching group (three of four elements were statistically significantly different, compared with two elements in the coaching group). Noting that overall workplace culture improved statistically significantly across both groups, this result indicated that coaching did not appear to assist with building job satisfaction or with enhancing quality and safety.

In relation to workplace engagement, there appeared to be a marginally more positive outcome for those who received coaching compared with those who did not (three of four elements in the coaching group compared with two of four in the non-coaching group). This suggests that coaching may assist with building greater workplace engagement, noting, however, that statistically significant levels of improved engagement were found across both groups.

7.13 Quantitative data from the 2015–2016 cohort (Cohort 2)

Self-rating data were collected from the 2015–2016 cohort. Data collection aimed to evaluate the perceived leadership development of this cohort over time in order to ascertain a) whether the leadership program lead to leadership outcomes for this cohort and, b) whether results were similar to intervention group findings from the 2014–2015 cohort.

Results of analysis for the 2015–2016 group can be found in Table 7.14.

Table 7.12 2014–2015 Intervention group: Self rating – coaching versus no coaching

INTERVENTION GROUP SELF RATINGS - Coaching **Within-group comparison**	**With coaching Interv. Group Mean: *Baseline***	**With coaching Interv. Group Mean: *Repeat***	**Coaching Group versus Coaching Group – Self rating *Difference Baseline and Repeat Measures (p-value)***	**Without coaching Interv. Group Mean: *Baseline***	**Without coaching Interv. Group Mean: *Repeat***	**Without Coaching Group versus Without Coaching Group – Self rating *Difference Baseline and Repeat Measures (p-value)***
Workplace Culture						
About their job	3.37	3.63	0.059	3.14	3.49	0.03
Person-centredness	3.12	3.33	0.009	3.19	3.4	0.011
Quality and safety	3.1	2.97	0.317	2.8	3.1	0.031
OVERALL	3.18	3.32	0.028	3.08	3.35	0.000
UWES						
Vigour	4.02	4.71	0.028	4.02	4.56	0.046
Dedication	4.43	5.14	0.075	4.54	4.89	0.057
Absorption	3.65	4.57	0.028	3.86	4.24	0.207
OVERALL	4.034	4.81	0.001	4.14	4.56	0.004
MLQ (5X-Short)						
Transformational Leadership elements						
Idealised Influence (Attributed)	2.75	2.86	0.679	2.57	3.04	0.126
Idealised Influence (Behaviour)	2.54	3.07	0.041	2.66	3.18	0.041
Inspirational Motivation	2.79	3.04	0.236	2.62	3.07	0.59
Intellectual Stimulation	3	3.21	0.496	2.86	3.29	0.176
Individualised Consideration	3.36	3.57	0.336	3.14	3.54	0.088
Transactional Leadership elements						
Contingent Reward	2.61	3	0.041	2.99	3.18	0.527
Management by Exception (Active)	1.96	1.6	0.111	1.79	2.18	0.058
Management by Exception (Passive)	0.96	0.57	0.112	0.71	0.57	0.460

Laissez-faire Leadership	0.5	0.54	0.888	0.64	0.46	0.096
Leadership Outcomes:						
Extra Effort	2.05	2.76	0.018	2.11	2.72	0.043
Effectiveness	2.96	3.21	0.167	2.86	3.17	0.102
Satisfaction	3.14	3.5	0.59	2.92	3.25	0.157

Table 7.13 2014–2015 Intervention group: Other rater – Coaching versus no coaching

OTHER RATERS – MLQ **Within-group comparison**	**With coaching Interv. Group Mean: *Baseline***	**With coaching Interv. Group Mean: *Repeat***	**Coaching Group versus Coaching Group – Other rating *Difference Baseline and Repeat Measures (p-value)***	**Without coaching Interv. Group Mean: *Baseline***	**Without coaching Interv. Group Mean: *Repeat***	**Without Coaching Group versus Without Coaching Group – Other rating *Difference Baseline and Repeat Measures (p-value)***
MLQ (5X-Short)						
Transformational Leadership elements						
Idealised Influence (Attributed)	3.10	3.31	0.310	2.83	2.79	0.854
Idealised Influence (Behaviour)	2.75	3.03	0.310	2.46	2.85	0.173
Inspirational Motivation	3.20	3.26	0.715	2.84	2.86	0.786
Intellectual Stimulation	2.93	3.16	0.310	2.80	2.68	0.750
Individualised Consideration	3.14	3.11	0.917	2.94	2.72	0.786
Transactional Leadership elements						
Contingent Reward	3.12	3.09	0.833	2.92	2.82	0.588
Management by Exception (Active)	2.07	2.08	1.00	1.75	1.63	0.528
Management by Exception (Passive)	0.51	0.51	0.674	0.67	0.97	0.074
Laissez-faire Leadership	0.20	0.25	0.753	0.53	0.56	0.893
Leadership Outcomes:						
Extra Effort	2.86	2.84	0.735	3.14	2.98	0.893
Effectiveness	3.53	3.36	0.344	3.52	3.14	0.461
Satisfaction	3.61	3.61	0.891	3.65	3.4	0.416

7.13.1 Workplace culture

Analysis of pre- and post-test measures of workplace culture relating to job and person-centred approaches for study participants in the 2015 group found no significant difference in mean scores for baseline and repeat measures. There were significant differences in mean scores on quality and safety measures and for the overall workplace culture measure. Results suggest that participants felt that overall workplace culture and quality and safety improved over the course of the program.

It is noted that findings differed from the 2014–2015 intervention group cohort, where significant differences were found in relation to their job and person-centred care but not for quality and safety.

7.13.2 Workplace engagement

Analysis of pre- and post-test measures for the 2015–2016 participants found significant differences in scores for baseline and repeat measures in two of the three UWES elements (vigour and dedication) and for the overall measure of workplace engagement. With the 2014–2015 cohort, significant differences were found on all four measures.

7.13.3 Leadership

MLQ Self-rating: Analysis of pre- and post-test measures for participants in the intervention group found significant difference in scores for baseline and repeat measures on one of five transformational leadership elements (higher than baseline) and on two of the three leadership outcomes (higher than baseline).

This differs from the 2014 cohort, in that fewer transformational elements were found. However, results still provide sound evidence of improvement in leadership skills.

MLQ Other rater: No data was collected in relation to other raters (managers, subordinates, peers) with this group.

Table 7.14 Results from the 2015–2016 cohort

SELF RATINGS **Within-group comparison**	**2015–2016 *Baseline (mean)***	**2015–2016 *Repeat (mean)***	**2015–2016– Self rating *Difference Baseline and Repeat Measures (p-value)***
Workplace Culture			
About their job	3.04	3.21	0.053
Person-centredness	3.15	3.26	0.058
Quality and safety	2.62	2.95	0.012
OVERALL	2.99	3.17	0.00
UWES (SPSS)			
Vigour	4.30	4.64	0.07
Dedication	4.66	4.93	0.028
Absorption	4.36	4.53	0.172
OVERALL	4.44	4.7	0.00
MLQ (5X-Short)			
Transformational Leadership elements			
Idealised Influence (Attributed)	2.59	2.84	0.036
Idealised Influence (Behaviour)	2.75	2.88	0.487
Inspirational Motivation	2.85	2.99	0.251
Intellectual Stimulation	2.8	3.01	0.094
Individualised Consideration	3.06	3.26	0.085
Transactional Leadership elements			
Contingent Reward	2.81	2.85	0.298
Management by Exception (Active)	1.66	1.77	0.273
Management by Exception (Passive)	0.81	0.59	0.056
Laissez-faire Leadership	0.56	0.68	0.210
Leadership Outcomes:			
Extra Effort	2.01	2.56	0.02
Effectiveness	2.79	3.03	0.045
Satisfaction	3	3.15	0.190

7.13.4 Workshop and Action Learning Set outcomes

As with the 2014 cohort, prior to and following Workshop 1, participants were invited to rate their level of knowledge in four areas: practice development, leadership, quality and safety and facilitation. Results are presented in Table 7.15.

Table 7.15 Workshop Outcomes: 2015–2016 cohort

WORKSHOPS 2015	Workshop 1 (n= 18)	Workshop 2 (n= 15)
Pre- Workshop Mean Score: Knowledge of Practice development	1.56	2.67
Post- Workshop Mean Score: Knowledge of Practice development	2.89	3.8
p-value	0.00	0.001
Pre- Workshop Mean Score: Knowledge of leadership	2.56	3.07
Post- Workshop Mean Score: Knowledge of leadership	3.44	3.93
p-value	0.001	0.00
Pre- Workshop Mean Score: Knowledge of quality and safety (workshop 1) and facilitation (workshop 2)	2.78	2.87
Post- Workshop Mean Score: Knowledge of quality and safety (workshop 1) and facilitation (workshop 2)	3.11	3.93
p-value	0.034	0.002

Results show that participants reported statistically significant higher levels of knowledge in all topic areas after each of the workshops, including practice development (workshops 1 and 2), leadership (workshop 1 and 2), quality and safety (Workshop 1) and facilitation (Workshop 2). This differs from the 2014 cohort, when there was not a statistically significant change in how participants rated their knowledge of quality and safety after Workshop 1.

As with the 2014 intervention group, participants were invited to rate their level of confidence in three areas before and after each of the ALSs, in facilitation, with asking enabling questions and in presenting a topic as part of the ALS. Results of these are outlined in Table 7.16.

The 2015 cohort reported statistically significant higher levels of confidence in the three areas of facilitation, questioning and presenting after each of the ALSs, with the exception of ALS 4 in the area of presenting on a topic. Overall, these findings show more positive statistically significant differences across a greater number of ALSs than the 2014 intervention group.

Table 7.16 2015–2016 group self-report of levels of confidence: ALS – 2015–2016 cohort

ACTION LEARNING SETS 2015-2016	ALS 1 July (n= 13)	ALS August (n= 12)	ALS September (n= 8)	ALS October (n= 7)
Pre- ALS: Mean Score: Confidence with facilitation	2.31	3.08	3.4	3.41
Post- ALS: Mean Score: Confidence with facilitation	3.23	3.46	3.8	3.83
p-value	0.0001	0.034	0.024	0.025
Pre- ALS: Mean Score: Confidence with questioning	2.39	3.08	3.33	3.17
Post- ALS: Mean Score: Confidence with questioning	3.36	3.54	3.63	3.67
p-value	0.001	0.02	0.034	0.014
Pre- ALS: Mean Score: Confidence with presenting	2.69	3.25	3.54	3.75
Post- ALS: Mean Score: Confidence with presenting	3.39	3.73	4.12	3.92
p-value	0.024	0.014	0.005	0.157

7.14 Summary: Quantitative results

Quantitative results from the Allied Health Leadership Development study produced strong evidence for the effectiveness of the program across two program cohorts, and in comparison with a matched control group for Cohort 1 where a randomised control trial was undertaken.

7.15 Integration of study findings

This section of the chapter aims to integrate the qualitative and quantitative research findings of the study in order to draw conclusions in relation to the effectiveness of the SESLHD Allied Health Leadership Development Program.

7.15.1 Aims of the study and research question

As outlined in Chapter 1, the objectives of this study were:

1. To develop a leadership framework for allied health practitioners informed by transformational leadership and practice development theories and use this to design an allied health leadership program.

2. To evaluate the implementation of the leadership program for allied health clinicians within a NSW Local Health District (SESLHD).

3. To determine whether the program led to enhanced leadership capability, workplace engagement and workplace culture.

4. To determine whether the program led to demonstrable practice change and service improvement.

5. To ascertain whether the program led to measurable improvement in clinical governance, including specified measures of quality improvement.

In particular, the research sought to answer:

Is a leadership program that uses transformational leadership and practice development methodologies effective in equipping allied health clinical leaders to better lead and to manage change in order to improve person-centred healthcare?

When considering the complementarity mixed methods approach using the qualitative and quantitative results from this study, there is strong evidence that a leadership program that uses transformational leadership and practice development methodologies is effective in equipping allied health clinical leaders to better lead and manage change in order to improve person-centred healthcare.

The results obtained from research qualitative and quantitative measures provide empirical means by which to evaluate the leadership program. Results have clearly demonstrated that the Allied Health Leadership Development Program resulted in enhanced leadership capability, workplace engagement and workplace culture measures and outputs for participants, compared with a control group. Practice change and quality improvement has been demonstrated by way of increased quality activities and project implementation, with greater output demonstrated by program participants, compared with a control group.

7.16 Scientific hypotheses

As outlined in Chapter 6, a number of scientific hypotheses (H_{01-06}) related to study focus areas were proposed to test the intervention, as follows.

H_0: Among allied health clinicians in a Local Health District, there is no difference between allied health practitioners undertaking a 10-month allied health leadership development program and those in a matched allied health study control group without a 10-month allied health leadership development program.

These hypotheses specifically focus on comparison between data obtained from the randomised control trial undertaken in 2014–2015, where an intervention group cohort was compared with a matched control group (see tables 7.6 and 7.8). The level of statistical significance was accepted at a value of $p<0.05$, indicating evidence against the null hypothesis if the P-value is lower than 0.05, and little or no evidence against the null hypothesis if P is higher than 0.05 (Silva-Ayçaguer et al., 2010).

Based on findings from this study, there is evidence against the null hypotheses (H_{01-06}) that there is *no difference between allied health practitioners undertaking a 10-month allied health leadership program and a matched allied health study control group in measures of workplace culture, person-centred care, quality improvement, workplace engagement, transformational leadership measures and leadership outcomes*.

Each of these hypotheses will now be briefly summarised, incorporating both pre- and post-program differences between the control and intervention groups as well as the differences within each group over time. Data from the 2015–2016 cohort will also be considered.

H_{01} Workplace culture

Statistically significant differences were found in relation to workplace culture measures between allied health practitioners undertaking a 10-month allied health leadership program and a matched allied health study control group. Statistically significant differences in overall workplace culture measures were also found for the 2015–2016 cohort after the program.

Statistically significant differences were also found for the 2014–2015 cohort within-group measures for the control group (achieved a poorer result) and the intervention group (achieved a more positive result).

H_{02} Person-centred care

Statistically significant differences were found in relation to person-centred care measures between allied health practitioners undertaking a 10-month allied health leadership program and a matched allied health study control group. A statistically significant difference was not found for this measure with the 2015–2016 cohort after the program.

Statistically significant differences in measures were also found for the 2014–2015 cohort within-group measures for the control group (negative result) and the intervention group (positive result).

H_{03} Quality Improvement

Statistically significant differences were found in relation to quality improvement measures between allied health practitioners undertaking a 10-month allied health leadership program and a matched allied health study control group. A statistically significant difference was also found for this measure with the 2015–2016 cohort after the program.

Statistically significant differences in quality improvement measures were not found for the 2014–2015 cohort within-group measures (control and intervention groups).

It is noted that qualitative results from the study demonstrated an increase in the number of quality improvement activities commenced or completed by those who had completed the program.

H_{04} Workplace engagement

Statistically significant differences were found in relation to the workplace engagement measure of vigour and overall engagement between allied health practitioners undertaking a 10-month allied health leadership program and a matched allied health study control group. Statistically significant differences in overall workplace culture measures as well as the elements of vigour and dedication were also found for the 2015–2016 cohort after the program.

Statistically significant differences were also found for the 2014–2015 cohort within-group measures for the intervention group. There were no statistically significant differences of within-group measures for the control group.

H_{05} Transformational leadership measures

Statistically significant differences were found in relation to three of five self-reported transformational leadership measures between allied health practitioners undertaking a 10-month allied health leadership development program and a matched allied health study control group. A statistically significant difference in one transformational leadership measure was found for the 2015–2016 cohort after the program.

Statistically significant differences on these three transformational leadership elements were also found for the 2014–2015 cohort within-group measures for the intervention group. There were no statistically significant differences in within-group measures for the control group.

H_{06} Leadership outcomes

Statistically significant differences were found in relation to three of three self-reported transformational leadership outcome measures between allied health practitioners undertaking a 10-month allied health leadership development program and a matched allied health study control group. Statistically significant difference in two of three leadership outcome measures were found for the 2015–2016 cohort after the program.

Statistically significant differences in transformational leadership outcome measures were also found for the 2014–2015 cohort within-group measures for the control group (achieved a poorer result) and the intervention group (achieved a more positive result).

The null hypothesis ($H_{01–06}$) postulated that there would be no difference between allied health practitioners undertaking a 10-month allied health leadership development program and those in a matched allied health study control group without a 10-month allied health leadership development program. Table 7.17 summarises the results of the randomised control trial from Cohort 1.

Table 7.17 Summary of results of randomised control trial for the 2014–2015 Cohort

	Results	**Null hypothesis**
H_{01} *workplace culture*	Statistically significant differences across groups.	Evidence against the null hypothesis.
H_{02} *person-centred care*	Statistically significant differences across groups.	Evidence against the null hypothesis.
H_{03} *quality improvement*	Statistically significant differences across groups.	Evidence against the null hypothesis.
H_{04} *workplace engagement*	Statistically significant differences across groups.	Evidence against the null hypothesis.
H_{05} *transformational leadership measures*	Statistically significant differences across groups.	Evidence against the null hypothesis.
H_{06} *leadership outcomes*	Statistically significant differences across groups.	Evidence against the null hypothesis.

7.17 Conclusion

Synthesis of research data from the allied health leadership development study produced strong empirical evidence for the effectiveness of the program across two program cohorts, and in comparison with a matched control group, providing evidence against the null hypotheses for the study. It also enabled the research question – that a leadership development program underpinned by transformational leadership and practice

development theory enhances clinician leadership capacity and person-centred healthcare – to be answered in the affirmative.

These are important research findings as they demonstrate that allied health clinicians benefit from leadership development based on transformational leadership theory and practice development. As illustrated in the literature review of leadership and allied health, these findings have not previously been reported in the literature.

The implications of these results will be discussed in more depth in the next chapter.

Chapter 8: Discussion

8.1 Introduction

Leadership in healthcare is considered fundamental to ensuring safe and high-quality care (Berwick, 2003; Bohan & Laing, 2012). Clinical leadership at all levels of an organisation is needed to optimise healthcare services, improve teamwork across the clinical team, build safety, and to foster innovation. (Snodgrass et al., 2008; Wylie & Gallagher, 2009; Leonard & Frankel, 2012). As Brown and Dewing succinctly state: 'In a nutshell, clinical leadership is required for the provision of person-centred and effective care of people providing care and those receiving care' (Brown & Dewing, 2016, p.569).

Leadership is thus important to ensure that the quality of healthcare is high. It is also required to assist healthcare systems operate within a complex and rapidly changing context (West et al., 2015). Given that leadership is such a critical element for safe and quality healthcare, 'leadership can, and should, be taught' (Casida & Parker, 2011, p.484).

Practice development is an approach aimed at promoting flourishing and person-centred workplaces in order to enhance the quality and effectiveness of healthcare provision. In this context, person-centredness refers to relationships characterised by compassion, kindness, trust and respect (Titchen & Hammond, 2017). To date, much of the practice development research literature has focused on nursing practice, with limited published studies relating to allied health.

Primarily, this study sought to test whether practice development processes and methods combined with transformational leadership theory were effective in developing the leadership skills of allied health professionals. The study is significant as it explores and brings together several areas of limited investigation in the literature, including (a) allied health leaders and leadership, (b) allied health and practice development, and (c) allied health leadership development. These areas of study are discussed below.

8.2 Allied health leaders and leadership

While leadership research is extensive, research into leadership is a complex area encompassing leader characteristics (such as personality and behaviour), leadership context

and follower characteristics (Firth-Cozens & Mowbray, 2001). In the allied health arena, leadership and leadership development have not been comprehensively evaluated (Bradd et al., 2017; Joubert et al., 2016).

The research commenced with a formal study examining the elements of allied health leadership from the perspective of allied health leaders in NSW. This not only provided the cultural and governance context for allied health service provision in the NSW public healthcare sector, but also identified opportunities for allied health leaders in the broader healthcare context.

This chapter will begin with a discussion of several elements of allied health leaders and leadership arising from the *NSW Allied Health Leadership Study*, including the culture of allied health and how allied health clinicians and managers view and experience leadership. Allied health attitudes to leadership will also be discussed. These results provide a context for the broader evaluation of the SESLHD Allied Health Leadership Development Program, as well as new insights into the way in which allied health has positioned itself as a leadership construct within the healthcare environment. A discussion relating to findings from the leadership development program will then follow.

8.2.1 Allied health culture

The *NSW Allied Health Leadership Study* (see Chapter 4) asked Allied Health Directors what they thought were the defining features of allied health ('what makes us "us"'). In response, it was stated that allied health professionals had a breadth of skills (*competence*); were learners (*curious*); and were *collaborators* and team players who have openness, integrity and honesty. Allied health clinicians were described as *person-centred;* that is, they considered the whole person across all environments. Finally, they were *diverse* yet *inclusive*, *humble* and *committed*.

In summary, the group described allied health as *patient-focused professionals who work in teams to provide, high quality healthcare*. The culture of allied health is being person-centred, team-based, inclusive and holistic. A schema of this is found in Figure 8.1.

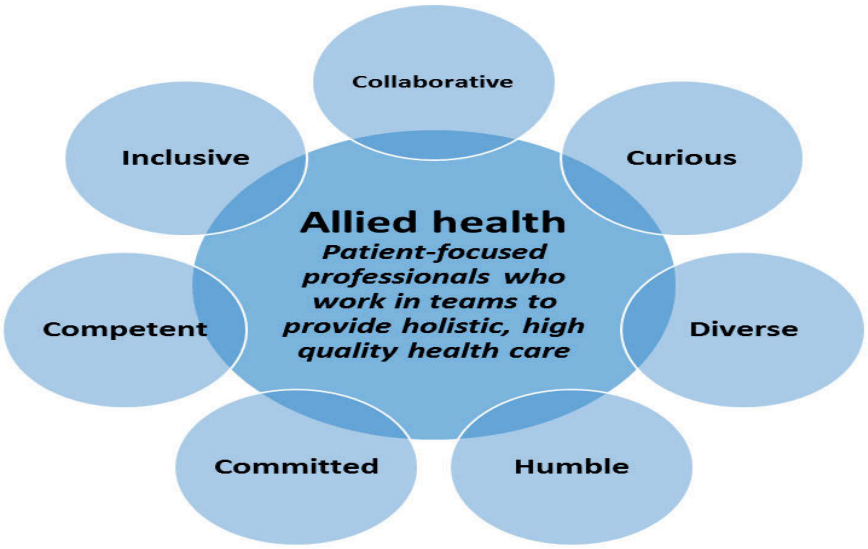

Figure 8.1 Schema: Allied health cultural framework

The NSW leadership survey, along with evaluation from the SESLHD Allied Health Leadership Development Program, highlighted allied health's approach to change and ways of working. It is clear that allied health clinicians do not work through 'vertical' hierarchies; rather, they work in the 'horizontal', across teams, wards and processes. At all times, they wrap care around a patient, such that patients as persons are at the heart of practice. Care is provided across a continuum and encompasses the broader context for the patient. This is represented diagrammatically in Figure 8.2.

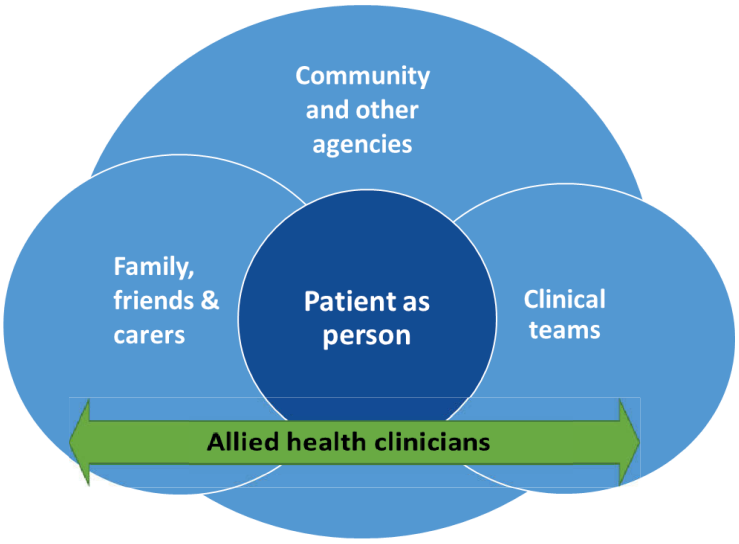

Figure 8.2 Schema: Allied health ways of working

From a leadership perspective, the allied health way of working within the traditionally hierarchical environment of the healthcare system can be problematic. Building leadership confidence to enable allied health practitioners to operate within the multidisciplinary team and executive environment will help allied health more confidently and comfortably work within their own cultural paradigm. In the case of the allied health clinicians leading their own teams, the allied health way of working is a strength, as it readily engages others for positive effect.

Participants in the *NSW Allied Health Leadership Study* identified the need to build and grow allied health influence and to more clearly demonstrate allied health's contribution and value. A call for allied health leaders in NSW to realign efforts towards more strategic issues influencing governance, performance, professional standards and advocacy arose from this study, which entails broadening the vision and scope of the Directors of Allied Health as well as across discipline-specific leaders.

Understanding the cultural elements of allied health is important because the healthcare workplace culture is a critical factor in the delivery of person-centred, clinically effective and continually improving clinical care. It is known that effective workplace cultures can improve patient experience; clinical safety; staff commitment and effectiveness; adaptability; and productivity (Manley et al., 2011b). Attaining greater insight into the culture of allied health as a professional group was, therefore, an important outcome of this study.

In Australia, the notion of allied health as a distinct, recognisable 'professional community' with a multidisciplinary membership was first postulated by Boyce in 2006. A decade on from Boyce's description of allied health as subordinates of medicine (Boyce, 2006a), this research suggests allied health has advanced and further defined its own distinct culture and ways of working. Organisational structures for allied health professionals in NSW have evolved, and the capacity to influence the healthcare system through innovation and service improvement is expanding.

It is postulated that better understanding the culture of allied health and its strengths as a group will assist allied health leaders to increase their capacity to make the necessary changes to enhance performance and build influence. Further in-depth evaluation exploring

the elements of allied health culture would add value to the seminal work by Boyce (Boyce, 2006a; Boyce, 2006b) along with the foundational work described in the current study.

8.2.2 Leadership in allied health

Allied Health Directors described communication, listening, setting a vision, innovation, authenticity, integrity and accountability as the important attributes of leadership. They felt successful leaders were engaging, effective in their role and able to inspire others. In the context of the overall study, these attributes of successful leaders align with transformational leadership behaviours described as part of the full range leadership theory (Bass & Avolio, 2004). This indicates that using a transformational approach to leadership development aligns with the culture and approach of allied health.

However, while the evaluation of transformational leadership approaches has been widely examined in the nursing literature (for example, see Martin et al., 2012; Cummings et al., 2010; Casida & Parker, 2011), there are limited empirical studies in relation to allied health and transformational leadership, as illustrated by the review of the literature (Chapter 3). The present study thus provides important new evidence in relation to the acceptability of the full range leadership theory approach by allied health professionals.

8.2.3 Allied health attitudes

Attitudes towards and from allied health leaders are at a point of transition. Although there is acknowledgement that support for allied health is changing, there is variable treatment of allied health across the NSW health system, as evidenced by the *NSW Allied Health Leadership Study*. While most respondents were positive about the future for allied health, Allied Health Directors did not feel that they were treated equally with their medical and nursing/midwifery colleagues, and some felt their Allied Health Director roles were not well understood by their executive team.

This attitude reflects several cultural elements of allied health, including that of humility. The power arrangements that have existed in healthcare influence the capacity of allied health clinicians to engage in the change agenda (Bradd et al., 2013; Boyce, 2006a). Building confidence and the capacity to enact change within the allied health clinical environments will, therefore, be an important outcome of leadership development.

As part of the *NSW Allied Health Leadership Study*, focus group participants identified a need for an enhanced political acumen and for allied health to take on leadership responsibility within local contexts, including an expanded focus extending beyond just allied health. This is an area that requires further attention by both allied health leaders and healthcare organisations.

8.3 Practice development and allied health

Practice development is a complex methodology aimed at optimising person-centred healthcare. It has been suggested as a way of involving people at all levels to create a culture wherein people are heard and feel they can make a difference (Lamont et al., 2009). However, despite the practice development principle of inclusiveness ('involving all internal and external stakeholders'), the practice development literature is principally nursing-focused (Manley et al., 2008a, p.5). In SESLHD, application of practice development by allied health professionals was limited.

This research clearly demonstrated that allied health practitioners can relate to the principles and processes of practice development. For those in the SESLHD Allied Health Leadership Development Program, there was a natural resonance with person-centredness, participatory, collaborative and inclusive approaches, and active learning, as they closely align with the cultural elements of allied health identified in the *NSW Allied Health Leadership Survey*.

Participants readily applied practice development methods to their practice environments. In the program evaluations, the majority of participants (80%) agreed or strongly agreed that learning about practice development was an important component of the program. In reporting on the most useful aspect of the program, some participants highlighted practice development as part of their learnings:

> Practice development/clinical practice improvement → excellent practical information to measure outcomes and also for determining aspects of practice which need focusing on. [Participant 4 2016]

> Learning about practice development and how it adds a greater depth and dimension to improving quality and safety of care through being person-centred and guiding sustainable change and development in teams and individuals. [Participant 2 2015]

It is suggested that the practice development movement would benefit significantly from the unique and different perspectives and insights allied health practitioners could bring by way of more systematic involvement. To enact this in the healthcare environment requires consideration and active planning to involve allied health practitioners and the wider multidisciplinary team at all levels, macro (organisational), mezzo (hospital or service) and micro (unit or team).

8.4 Allied Health Leadership Development

The SESLHD Allied Health Leadership Development Program is the main focus of this research study. Its core elements have been synthesised in the schema in Figure 8.3.

Figure 8.3 Schema of the SESLHD Allied Health Leadership Development Program

The schema illustrates the program elements that are considered the primary enablers of leadership development, including:

- *Self*, encompassing the ability to learn and self-motivation
- *Support*, involving access to support from others to critically reflect and set goals in order to develop and grow using coaching
- *Experience by doing*, by undertaking contextualised work-based learning that enabled skill development along a continuum in practice

The SESLHD Allied Health Leadership Development Program produced strong evidence of program effectiveness, as evidenced by qualitative and quantitative data. These data will now be discussed.

8.4.1 Findings from the study

Empirical evidence from this study demonstrated that an allied health leadership development program underpinned by transformational leadership and practice development theories leads to enhanced leadership capability, workplace engagement and workplace culture.

Data collected through this study showed there are a range of mechanisms and approaches that assist with participant learning and that lead to positive workplace change. The critical elements identified by research findings arising from the data included experiential and applied learning, the learning environment, empowering others, leadership confidence and learning as leaders. Outcome measures and program data also illustrated areas of leadership growth and development.

8.4.1.1 Experiential and applied learning

Experiential learning – learning that is contextualised in practice – was shown to be effective in developing allied health leaders. Qualitative data obtained from the study illustrated that experiential learning was a powerful mechanism to enable the leaders to develop skills and confidence. Applied learning and critical reflection enabled by the workshops, the ALSs and the applied workplace project assisted participants in applying the program theory and practice development methods, such as facilitation, in functional ways that were relevant to the participant's context.

Using different approaches to learning in the program was also useful. For example, tasks that creatively engaged with members (such as craft or the use of symbols) resulted in participants expressing their opinions, insights and stories visually in varied and inspiring ways, all unique to each individual yet seemingly shared, understood and embraced by the group. These approaches are not typically used in traditional allied health learning environments.

Applied practice, in particular using ALSs, was effective in providing participants with the opportunity to use their skills in a safe environment, while the workplace project enabled participants to apply their skills in their local context. This action learning, where there is active learning within the context of a workplace (Dewing, 2010; Akhtar et al., 2016), was considered a fundamental element in the success of the program. In addition, having others share the experience seems to help people learn (Corder, 2002). Active sharing (leading to the opportunity to learn from each other) was also evident in the workshops and ALSs.

Having a practical program, with resources, strategies, tools and ideas that could be immediately implemented in their workplace or team after each session, was found to be effective for leader development. Future programs could benefit from including even more practical activities, such as additional site-based ALSs, networking opportunities outside the formal meetings, and more role-plays, as suggested by program participants. It is noted that participant feedback has led to the continuation of an ALS program for interested program graduates, with a group of past participants continuing to meet and taking turns to independently lead quarterly ALSs since completing the program themselves.

Results clearly show that the program was applicable to the public healthcare environment of SESLHD. Due to its high applicability to the workplace and application to real-world practice, this research can be considered translational (Woolf, 2008).

8.4.1.2 The Learning Environment

This study showed that a supportive learning environment was effective in developing allied health leaders. Research findings illustrated that a supportive learning environment resulted in program participants reporting greater confidence in being able to manage change and in engaging their staff, colleagues and patients in decision-making affecting the quality and safety of care. In the current healthcare environment, this is critical, as it can have a direct effect on the quality of patient care.

Having an environment that enabled participants to develop a high level of trust, safety and engagement was also found to be an important factor in leadership development. This type of setting gave people the freedom to explore and test new ideas and approaches in a safe and nurturing way. Practice development methods such as ‘High Challenge, High Support’

assisted real and in-depth consideration of issues and challenges, leading to a greater depth of learning and development.

8.4.1.3 Empowering others

Effective allied health leaders have the skills to create an environment that empowers others. An enhanced capacity to empower others was demonstrated through this study, with program participants reporting that the program improved their clinical practice to be more focused on empowering patients in decisions affecting their care. Participants also described how the program improved the way they interacted with their teams as leaders. For example, one participant reported that they now saw leadership as *'creating an environment that supports your team in being engaged to solve problems and collaboratively engage in change and the process of change*' *[Participant 4 2016]*.

The program led to some leaders feeling more visible as a leader, as evidenced by comments such as:

> Others approach me more as a leader – they seem to have more confidence in me and what I can offer in terms of making important decisions where previously they haven't. [Participant 6 2015].

These are important findings, because empowering others through greater awareness, identifying as a leader and instilling confidence in others are useful and desirable outcomes that show the effectiveness of the program.

8.4.1.4 Leadership confidence

Confidence in leadership ability was improved through the program. A striking and important finding from this study was the change in leadership confidence reported by study participants, with 64% of participants (n=9 of 14) in the 2014–2015 intervention group cohort and 53% (n=9 of 17) in the 2015–2016 group specifying that they were more confident in the leadership role when asked '*In what way has your learning affected you most?'*.

This was further evidenced by 57% (n=8 of 14) of 2014–2015 intervention group program participants successfully attaining a promotional position following completion of the program, compared with 6% of control group members (n=1 of 16). In the 2015–2016

group, 47% (n=8 of 17) were appointed to a more highly graded (promotional) position following completion of the leadership program.

Results from the two program groups demonstrated that the program was effective in equipping allied health clinicians for more senior leadership roles. This is an important outcome that confirmed that the program enhanced self-empowerment and identity, thereby creating the capacity for allied health leaders as individuals to self-reflect and master their own capacity to make a difference (MacPhee et al., 2013; Day & Harrison, 2007; MacPhee et al., 2012). In effect, as their leadership self-efficacy grew, participants came to see themselves as leaders and were motivated to seek out new opportunities. Engaging with new leadership experiences will, in turn, even further enhance their capacity to lead into the future (Day & Harrison, 2007).

8.4.1.5 Learning as leaders

The role of learning and the importance of greater awareness of self as part of leadership development was substantiated by the research. It was evident that undertaking the leadership program generated much movement and growth as participants developed awareness of both self and others within a context of active learning. This awareness of self and others is considered a fundamental and foundational element of leadership (Health Workforce Australia, 2013).

While critical reflection is a core allied health competency required for clinical supervision, it was found that, as Boomer and McCormack state, 'reflecting on practice does not automatically lead to reflective practice' (Boomer & McCormack, 2010, p.639). The program successfully fostered a reflective way of being as *leaders*, not just as *clinicians*. This was achieved, as evidenced by the high number of responses from participants stating that they are reflecting more on their leadership since the program. For example, when asked how the program has affected them personally, one person responded that the program '*Consolidated the importance of taking the time to reflect deeply with leadership*' [Participant 1 2015].

The use of coaching was effective in assisting participant growth by enabling a more individualised approach to reflection as part of leadership development. Those who received coaching identified significant benefit and value in having access to this

individualised support, in particular for developing greater self-efficacy in their leadership role and for embedding strategies to maintain and develop awareness and self-care as leaders. For these reasons, coaching could be seen as a useful adjunct to the leadership development program for those who have coaching resources available.

8.4.1.6 Measures of leadership behaviours and outcomes

Allied health leaders showed discernible improvements in leadership measures after completing the leadership development program, evidenced by statistically significant differences ($p<0.05$) in self-reported leadership performance both in transformational leadership elements and in leadership outcomes for participants who undertook the leadership program across both cohorts of participants. This contrasts with results from the study control group, where there was no change in leadership measures across pre- and post-program data. These data provide robust evidence that the 'intervention' (the SESLHD Allied Health Leadership Development Program) led to improved leadership outcomes and increased transformational leadership behaviour, thereby illustrating the effectiveness of the program in developing allied health leaders. This is an outcome not previously reported in the literature.

The program did not show any difference in how other people (managers, peers and subordinates) rated the leadership skills of intervention group participants using the MFQ before and after the program. This suggests that other people did not perceive the change of transformational leadership skills and leadership outcomes identified by the participants themselves.

MFQ results did, however, show a statistically significant deterioration in how other people (managers, peers and subordinates) rated control group participants in relation to two transformational leadership elements and two leadership outcomes. There were also increased scores for the laissez-faire leadership element and for one transactional leadership element. These findings are not desirable outcomes, as they show a lesser tendency towards transformational leadership behaviours.

As the control group findings were not expected, it is hypothesised that the statistically significant negative results found with the control group on a range of MFQ measures may be attributable to an organisational restructure of allied health that was in progress at the

time of repeat data collection in 2015. While organisational change through restructures aims to enhance efficiency, it can reportedly lead to disruption, dislocation and, indeed, reduced efficiency (Braithwaite et al., 2006; Braithwaite et al., 2005). This may have been the case in this situation.

Although there was no reported change in transformational leadership attributes by other raters (managers, peers and subordinates) for the intervention group, findings from the control group suggests that MFQ leadership ratings could possibly be affected by organisational factors. Thus, the fact that ratings did not deteriorate for program participants during a time of significant organisational change and uncertainty could potentially be viewed as a positive program outcome.

8.4.1.7 Measures of workplace engagement

Allied health leaders became more engaged following a leadership development program that focused on person-centred practice and workplace flourishing. Results and data analyses demonstrated a quantifiable improvement in workplace engagement (as measured by the UWE) for those who were enrolled in the leadership program across the two programs and in comparison with the members in the study control group. This is a noteworthy finding that provides evidence that the leadership program enhanced workplace engagement.

Given that workplace engagement is needed for satisfied and fulfilled employees and that a high level of workplace engagement leads to better employee performance, connectivity and satisfaction (Schaufeli et al., 2006), improved workplace engagement is a desirable program outcome.

8.4.1.8. Measures of workplace culture

A better workplace culture ensued when allied health leaders undertook the leadership development program, with data from this study showing that the 2014–2015 intervention group measures of workplace culture were statistically better across all elements measured than the control group after program implementation, compared with no difference in these measures at baseline. Statistically significant improvement in workplace measures and workplace engagement was also found for participants in the intervention group before and after the program. This contrasts with findings from the control group, where there were in

fact reduced workplace outcomes reported with some measures over the period of the study.

The poorer outcomes from the control group again suggest that organisational change can impact leadership outcomes. It also potentially highlights that organisational restructures may have a negative effect on workplace engagement and leadership effectiveness, indicating the impact for the organisation of a restructure process.

Leadership development may improve allied health attitudes to quality and safety; however results from this study were not conclusive. The within-group measures for the 2015–2016 cohort showed significant differences in mean scores on quality and safety measures, but there were no statistically significant changes in attitudes in relation to quality and safety found in either the control or intervention group in the 2014–2015 cohort. This may be due to the nature of the questions, which focused on issues such as the quality of patient care, teamwork, quality activities, follow-up of near-misses and quality as a team priority. This area requires further investigation.

8.4.1.9 Measures of coaching impact

The impact of coaching on leadership development and leadership outcomes was not clearly evident in this study. Analysis was undertaken to determine whether coaching made a quantitative difference to outcomes from the leadership program for those in the 2014–2015 intervention group. While no overall statistically significant differences were seen in leadership characteristics and leadership outcomes for those intervention group participants who received coaching compared with those who did not receive coaching, there were some differences in the outcomes of some elements of workplace engagement.

The enhanced workplace engagement in the group that received coaching may be due to the highly engaging nature of the coaching relationship, that is, providing individualised support to program participants, thereby building relationships and tailored strategies for coachees. The reason for the less positive outcome for those who received coaching with respect to job satisfaction or quality and safety was less clear, but it may indicate that coaching does not assist in these two aspects of workplace culture.

However, it is acknowledged that the number of participants in each of the groups (coaching and non-coaching) was relatively small (n=7 for each group), which potentially limited statistical power. As the effect of coaching on leadership development was a pilot sub-element of the study, sample size calculations were not undertaken. Thus, further data and evaluation incorporating a calculation in relation to statistical power is required to determine whether coaching makes a difference to leadership, engagement and cultural outcomes.

8.4.1.10 Measures of confidence with facilitation, effective questioning and presenting an issue

Leadership development of allied health clinicians using transformational leadership and practice development methods leads to enhanced confidence with facilitation, questioning and presentation of issues. A statistically significant higher level of knowledge of leadership, practice development, quality and facilitation was reported 92% of the time (n=11 of 12 ratings) after the program workshops across the two programs. Statistically significant higher levels of confidence in the areas of facilitation, effective questioning and presenting on a topic were also reported 79% of the time (n=19 of 24 ratings).

Findings demonstrated that leadership program participants were more confident in their facilitation, questioning and presenting skills following the workshops and the learning sets. This indicates that the workshops and ALSs were an effective means of developing the practical skills and abilities of program attendees, as they provide a supportive, safe environment for participants to apply and develop their skills.

8.5 Overall program evaluation

8.5.1 Health LEADS Framework and Kirkpatrick's Model of Evaluation

A number of overall program and organisational outcomes arising from the SESLHD Allied Health Leadership Development Program are evident, as evaluated using the Health LEADS leadership competency framework and the Kirkpatrick model of evaluation (Health Workforce Australia, 2013; Kirkpatrick & Kirkpatrick, 2006). These outcomes are summarised in Table 8.1 and will now be briefly discussed.

8.5.1.1 Outcomes: Health LEADS Framework

The SESLHD Allied Health Leadership Development Program addressed the key elements required by the Australian Government's leadership framework for healthcare service provision, being the Health LEADS framework (Health Workforce Australia, 2013).

a) Leads self

The leadership development program was effective in developing allied health program participants to better lead self. Participant feedback and enhanced transformational leadership behaviour and outcomes indicated learning and a change in behaviour. Active reflection through the ALS as well as within the coaching context assisted this ability.

Future programs could potentially be strengthened by the inclusion of a leader self-assessment and/or 360-degree feedback component to further enhance the capacity to understand and therefore better lead self. These were not undertaken as part of this research due to the use of the MLQ for self and other rater evaluation used as part of program measures.

b) Engages others

Allied health leadership program participants developed their ability to facilitate and engage others, which is significant because 'engagement is necessary for success' (Walsh et al., 2005, p.151). Given leader capability and capacity to influence was expanded through the program, this has both individual and organisational implications.

c) Achieves outcomes

Outcomes were achieved as part of the allied health program. The applied project within the program led to local and organisational improvement in clinical and organisational processes, as well as team-based outcome measures. Leaders can make a difference through outcomes. This entails collaboration, being goal-oriented and continuous improvement (Health Workforce Australia, 2013), all of which were demonstrated through the Allied Health Leadership Development Program. It is also noted that the person-centred practice framework (McCormack & McCance, 2017b) highlights a number of outcomes, including shared decision-making, that were also substantiated as part of program evaluation.

Table 8.1 Health LEADS Framework and the Kirkpatrick Model of Evaluation

Health LEADS Framework (HWA, 2013)	Program Evaluation	Kirkpatrick's Level 1 Reaction to the training	Kirkpatrick's Level 2- Learning measures	Kirkpatrick's Level 3 Measures of Behaviour	Kirkpatrick's Level 4 Results
Leads self	- Reflective practice - Empowerment and confidence	√	√	√	
Engages others	- Facilitation as leaders - Participation, inclusion, collaboration - Elements of the person-centred processes framework (McCormack & McCance, 2017) - shared decision-making, authentic engagement, working with the values and beliefs of the patients, care that is holistic, being present	√	√	√	√
Achieves outcomes	- Improvement (proactivity); processes - Leadership outcomes - Elements of the person-centred processes framework (McCormack & McCance, 2017) - shared decision-making, working with the values and beliefs of the patients, care that is holistic, being present		√	√	√
Drives innovation	- New models of care (through projects) - Facilitation of others			√	√
Shapes systems	- Becoming agents of change - Effective and quality care - Distributed leadership			√	√

d) Drives innovation

Participants in the leadership program had the opportunity to drive innovation using new models of care through facilitating their teams as part of the work-based project. This showed how leaders can direct new ways of working and innovation and work to support change (Health Workforce Australia, 2013).

e) Shapes systems

Systems thinking was achieved through the leadership program. Participants were equipped with the theory of change and leadership and applied this in practice through the implementation of work-based projects, to the benefit of their teams and of the organisation more broadly. Becoming an agent of change within a complex system such as healthcare is a fundamental leadership skill (Health Workforce Australia, 2013). An enhanced understanding of systems thinking and the ability to network and work with others was achieved as part of the program.

8.5.1.2 Outcomes: Kirkpatrick's Model of Evaluation

Using Kirkpatrick's Model of Evaluation, the qualitative and quantitative results from the SESLHD Allied Health Leadership Development Program evaluation clearly address the requirements of Levels 1–3 (reaction to the training, learning measures and measures of behaviour respectively) (Kirkpatrick & Kirkpatrick, 2006).

Desirable organisational outcomes arising from the study (Level 4 Results) are also evident. MacPhail and colleagues evaluated the feasibility of their leadership program by taking into consideration ease, convenience, practicality of delivery, availability of speakers, cost, resources and time. They also considered the extent to which clinical services were disrupted (MacPhail et al., 2015).

Using the criteria developed by MacPhail and associates (MacPhail et al., 2015), it is clear that the SESLHD Allied Health Leadership Development Program comprehensively addresses all these elements. As an in-house program delivered locally with existing resources, the program is convenient and practical. It requires minimal resources and can be arranged at times that align with the organisation's priorities. As the dates for the program were communicated at the commencement of the program, participants and their

managers could make arrangements to ensure that there was minimal disruption to clinical services.

In addition, the Allied Health Leadership Development Program was inexpensive to implement. The course was conducted by an existing SESLHD staff member and the guest speakers were provided without incurring any cost. This is unlike many leadership program's which are more typically conducted as an expense for an organisation (MacPhail et al., 2015). As a separate source of funding was not required to conduct or to attend the program, this was a highly accessible program. This ultimately means that the course provided high value and a substantial return for minimal investment.

There is, however, capacity for future programs to reflect on the learnings of this evaluation in order to make the program more accessible to various allied health groups across the organisation. For example, specific information could be provided to disciplines less represented in this study, such as pharmacy and psychology. Structuring the program to enhance access for part-time employees could also be considered.

8.5.2 Developing person-centred care through practice development

Person-centredness for individuals and their teams was enhanced by developing leadership capability. Formal program measures, participant feedback and the nature of the work-based projects showed the application of person-centred approaches within local work-places. Practice development was thus shown to be effective in developing leadership capability through its use of structured methods and facilitation.

It has been suggested that 'person-centredness is ultimately concerned with human flourishing' (Dewing & McCormack, 2017, p.150). Enhanced workplace engagement and workplace culture outcomes found of this leadership program indicated an improved capacity of the allied health leaders to flourish through well-being, a sense of empowerment and achievement (Dewing & McCormack, 2017). This culminated in leadership confidence and, for many, enhanced care practices.

8.5.3 Allied health quality improvement

Allied health clinicians are actively engaged with quality improvement activities and developed a greater focus on and engagement with quality and safety after the leadership

program. Study data found relatively high numbers of quality improvement projects were being undertaken by individuals and clinical teams at baseline (n=242 projects with n=47 clinicians). This indicates that allied health clinicians and their teams are currently involved with a high number of quality improvement activities.

Leadership development further expanded allied health involvement with quality initiatives. The research measured whether undertaking the leadership program influenced the number of quality projects undertaken by allied health personnel. At baseline, the number of projects undertaken in 2014–2015 by the control group exceeded those in the intervention group. It was also higher than the number of projects reported by the 2015–2016 group at baseline.

However, intervention group participants (Cohort 1) and members of the 2015–2016 program (Cohort 2) both reported an increased number of projects following the completion of the program (n=33 additional projects over two years). This suggests that program participants are more likely to undertake improvement activities following the program, indicating an enhanced quality and safety focus.

Safe, quality healthcare requires strong leadership (Leape & Berwick, 2000). However, published information about involvement of allied health leaders in the quality and safety agenda is limited (Dorning & Bardsley, 2014). These encouraging study results, along with the improvement in attitudinal measures of quality and safety of study participants after the leadership program, show that leadership development can enhance the capacity of allied health clinicians to focus on and engage with quality and safety initiatives.

8.6 Strengths and limitations

This research involved the design, implementation and evaluation of an allied health leadership development program based on sound theoretical models to enhance transformational leadership and person-centred care in the public healthcare setting. This research has shown that the leadership skills of allied health clinicians can be developed.

There are identified strengths with this study related to the research design, which utilised a mixed methods approach including a randomised control trial for the first study cohort. The use of a stratified, randomised pre-test/post-test group design, with a control group, to

quantitatively measure participant and program status and outcomes before and after the implementation of the SESLHD Allied Health Leadership Development Program as the intervention, was considered a robust approach. The leadership and workplace engagement measures were evaluated using validated and reliable tools widely used for research purposes. In addition, there was a 100% completion rate of all pre- and post-intervention surveys from all study participants and all returned surveys were usable. This gave rise to good internal validity of the study.

A number of limitations have been identified in relation to the research. In terms of research design, randomised control trials are considered to be the 'gold standard' (Crookes & Davies, 2006; Christ, 2014). It is noted that the subjects involved in this study were volunteer participants who self-selected for the study. This sampling may have the potential to affect the generalisability of findings. This was addressed through the use of a stratified process of randomisation to allocate subjects to either the control or the intervention groups in the 2014–2015 cohort in order to ensure a balance of sites and disciplines across each of the groups. This stratified approach meant that, although a randomised process of allocation was used, the two groups were well matched and results across the groups able to be compared.

External validity has been defined as the degree to which findings from a study can be generalised beyond the study sample, or 'the ease with which results can be used in practice' (Crookes & Davies, 2006; Bradley, 2006, p.164). This study was designed and implemented by one person and the same co-facilitator was also used across programs, leading to consistency in program delivery but potential problems with reflexivity. The program will therefore need to be presented and evaluated with other program facilitators across SESLHD and across healthcare more broadly to determine generalisability.

While there was a variety of disciplines from a number of SESLHD sites and services, there was a relatively small overall sample size (n=47), with a cohort limited to volunteers from one healthcare organisation. This also necessitates further research to determine generalisability to the wider allied health population. The sample size and selection process also meant that there was not the opportunity to evaluate whether there were any differences based on site, clinical area and specialty, or professional grade/ seniority.

Allied health disciplines in this study comprised a diverse group of individual professions, which each show unique traits underpinned by specific technical training. Another limitation of this study was the inability to analyse the differences in outcomes across each allied health discipline, due to the small numbers represented per discipline. This issue is considered an ongoing challenge for allied health, not just in the research sense but also in how they operate and are organised in healthcare organisations (Bradd et al., 2017; Boyce, 2006b).

Additionally, there was a loss of subjects during project implementation (n=3, 9% in 2014–2015 and n=3, 15% in 2015–2016) which may have had an impact on the statistical power of findings. The loss of subjects in 2014–2015 also resulted in two additional respondents in the control group for the 2014–2015 study cohort. It is noted that the baseline characteristics of participants who left the study (n=6) were excluded from all data analyses, which eliminated the risk of attrition bias (Dumville et al., 2006).

8.7 Conclusion

By integrating a number of programs and theoretical approaches, this research has demonstrated that an increase in transformational leadership behaviours and more effective leadership outcomes can be developed through action learning and applied approaches, as evidenced by improved outcomes using program measures. The study has also demonstrated the effectiveness of using practice development along with transformational leadership approaches for allied health leadership development where there is a focus on developing person-centred healthcare teams and flourishing workplace environments. This approach also builds greater clinical engagement and results in an improved focus on quality care.

Findings from this robust and comprehensive study suggest that investing in allied health leadership development can build leadership confidence and leader effectiveness, resulting in enhanced workplace engagement and positive leadership outcomes for allied health leaders, their teams and their patients. These are important findings which add new evidence to the allied health literature.

Chapter 9: Conclusion

9.1 Introduction

Leadership in healthcare is important for achieving safe, high-quality and compassionate patient care (West et al., 2015). The focus of this study was on allied health leaders and leadership development, with the hypothesis being that leadership skills of allied health professionals could be enhanced, leading to improved person-centred clinical care.

The program of study entailed systematic reviews of the current literature in relation to allied health and leadership and allied health and practice development. These reviews identified a lack of empirical information in relation to the two areas of focus. Based on sound theoretical models and informed by the NSW allied health leadership study, an allied health leadership development research framework was developed. This framework was used in the design of the SESLHD Allied Health Leadership Development Program.

The Allied Health Leadership Development Program was then implemented and evaluated using a randomised control trial. This entailed using a stratified, randomised pre-test/post-test group design, with an intervention and a control group, to quantitatively measure the culture, engagement and leadership skills of study participants before and after program implementation (Cohort 1). A second SESLHD Allied Health Leadership Development Program was implemented with an unmatched intervention group (Cohort 2).

Coupled with qualitative findings, quantitative results from this study have provided robust and new empirical evidence about allied health leadership development, evidence that had previously been lacking in the literature (Leggat & Balding, 2013). It has also provided data and evidence in relation to the application of practice development with allied health clinicians. This is also an under-explored area of study.

An evidence-based intervention is one that shows a statistically significant difference in an intervention group versus a control group and that should preferably be able to be replicated by independent researchers (Steensma & Groeneveld, 2010). This research has demonstrated that the SESLHD Allied Health Leadership Development Program is an evidence-based intervention that led to an increase in transformational leadership

behaviours and more effective leadership outcomes, as evidenced by improved outcomes using the MLQ compared with a matched control group. It also leads to greater workplace engagement, enhanced workplace culture, and workplace outcomes.

The study has also validated the effectiveness of using practice development with action learning and applied approaches for allied health leadership development where there is a focus on developing person-centred healthcare teams and flourishing workplace environments. This investigation has also shown that using this approach builds greater clinical engagement and results in an improved focus on quality care.

This research has illustrated an allied health leadership development framework underpinned by transformational leadership and practice development theories. The findings from this research have shown robust and empirically evaluated outcomes and demonstrated a feasible, low-cost and practical approach for enhancing the leadership skills of allied health professionals within the public healthcare environment. This study shows that investing in allied health leadership development can build leadership confidence and leader effectiveness, resulting in more engaged staff and positive leadership outcomes for leaders, their teams, their patients and the broader organisation. For these reasons, this research has implications for the future development of allied health leaders within the NSW healthcare environment.

9.2 Recommendations

This is an innovative study, in that it has provided new evidence in an area of research that had not previously been reported in the allied health literature. Based on the empirical research finding that leadership development underpinned by practice development and transformational leadership does lead to improved outcomes (workplace engagement, workplace culture, leadership skills and leadership outcomes), it is recommended:

1) That the Allied Health Leadership Program (renamed the *Leadership Excellence for Allied Health Professionals* (LEAHP) Program) be continued within SESLHD and expanded to involve other interested NSW healthcare organisations.

2) That program evaluation data continue to be collected and analysed with any subsequent programs in order to further build the evidence base for the program. In

particular, further data is required in relation to the quantitative effects of coaching as part of the leadership program.

3) That a LEAHP Program Training Package be developed for future LEAHP Program facilitators, to ensure that there is integrity and program consistency for others who implement the program. Given that conducting the SESLHD Allied Health Leadership Development Program required competencies in facilitation and coaching, along with a theoretical knowledge of practice development and leadership theory, the Package should include a set of minimum competency standards, to be determined by a self-assessment and external accreditation process. It should also stipulate the required level of theoretical knowledge.

4) That there is an ongoing opportunity to refine and improve the LEAHP Program based on participant feedback – for example, introducing additional mechanisms of peer-support, such as the use of critical companionship[4], in order to build greater autonomy and professional networks. Adding an element that involves self-evaluation and 360-degree leadership feedback for the purposes of individual leadership goal-setting would also be advantageous.

5) That organisational leaders such as the NSW Health Allied Health Directors Committee and the NSW Health Education and Training Institute consider these research findings within the broader context of allied health in NSW with a view to developing a state-wide program for allied health leadership development.

These recommendations will require a resource investment from participating healthcare organisations, including SESLHD. However, the actual cost of conducting the program is not substantial, with in-kind organisational support being the main cost, seen predominantly in personnel time away from the clinical environment.

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[4]In practice development, critical companionship is defined as being a relationship where an experienced clinician assists another through critical discussion and reflection. Critical companions are facilitators who assist the allied health clinician to understand what needs to change and how to make the change leading to a transformation of practice (Clarke & Wilson, 2008).

There is an increasing need for allied health professionals to link research evidence with their practice in order to enhance decision-making (Stephens et al., 2009). Further empirical research is required in relation to allied health leadership development to determine generalisability of findings across healthcare agencies and clinical settings. This should involve a greater number of allied health clinicians from all allied health disciplines, working across clinical areas. Testing the approach using other facilitators is also required.

As this study only analysed combined allied health data, additional empirical data and analysis is required in relation to the allied health leadership skills for each of the allied health disciplines to determine whether there are differences across professional groups. The MLQ research data obtained from this study cohort could, for instance, be combined with existing MLQ data on allied health disciplines from other studies and further analysed to build on existing published research, such as the discipline-level findings reported by the Scottish researchers Wylie and Gallagher (Wylie & Gallagher, 2009). This will help further build the profile of existing and emergent allied health leadership approaches for specific allied health disciplines, along with the allied health cohort as a whole.

While there is a need for further empirical research into many of the aspects explored by this study (for example, allied health workplace engagement), there is a clear and urgent requirement to build a research base in relation to allied health and the quality and safety agenda. It appears this is currently lacking in the international literature, despite the evidence suggesting that clinical governance and quality and safety are core responsibilities for clinician leaders (Dorning & Bardsley, 2014).

Further evidence in relation to the application of practice development with allied health is also required. This study has shown that the application of practice development is useful for the development of leadership practice and workplace flourishing. There is currently limited research investigating allied health involvement with practice development approaches in any sphere, meaning that there are numerous opportunities to apply practice development to other areas involving allied health. These include topics such as redesigning allied health clinical services, strengthening clinical teams and building values-based care.

With the evolving nature of healthcare and the expanding role of allied health professionals within the healthcare environment, further qualitative research pertaining to the culture of allied health as a professional group is also recommended. This should build on the research undertaken by Boyce and colleagues, who have been leading Australian research examining allied health organisational structures as well as allied health autonomy and identity in the provision of effective and responsive clinical services (Boyce, 2014; Boyce, 2001; Boyce, 2006a; Boyce, 2006b; Law & Boyce, 2003).

While this study examined the attitudes and perceptions of NSW Health allied health leaders in relation to the culture of allied health, the identified themes and concepts discussed in the study need to be further investigated and refined with a more expansive group, possibly across Australia. In particular, this could explore how allied health builds and enacts influence and demonstrates value in leadership.

9.3 Conclusion

The purpose of this research was to address the gap in the allied health literature pertaining to allied health and to practice development in relation to the effective development of allied health clinical leaders. This has been achieved by the development of an empirically evaluated allied health leadership development program designed for allied health clinicians by an allied health clinician.

With the healthcare environment rapidly changing, it is timely for health organisations to consider how they can support one of their greatest assets – their staff – to be the best they can be at work. This research provides a mechanism for organisations to empower their allied health leaders to make positive change that result in better engagement and a positive environment of workplace flourishing.

The study has demonstrated that allied health clinicians are person-centred and committed to quality care. It has also shown that, for many practitioners, the key issue is the need to grow confidence in their leadership ability and in their capacity to make a meaningful change to both clinical services and their own workplace environment. The SESLHD Allied Health Leadership Development Program was able to build allied health leader confidence and, in so doing, yielded a strong return on investment for the organisation.

In the current evidence-based health environment, this translational research study is timely. The findings of this Australian allied health study add robust and important evidence to what is currently a small body of research pertaining to allied health leadership. It is hoped that further inquiry by allied health practitioners within the healthcare system will build on these research foundations, in order to grow a stronger future for allied health clinicians.

APPENDIX 1: Practice development and allied health Critical Analysis Matrix

Author, year, journal, country	Peer Review	THEME I*	THEME II	THEME III	THEME IV	FOCUS / SUBJECTS/ DATA	RIGOUR (CASP)[1] (Young & Solomon 2009)[2]	FOCUS/ SUBJECTS/DATA	VALUE
Andersen (2012), International Practice Development Journal, Australia	Yes	x				Elderly patient, multidisciplinary team.	NA	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 & Biong (2014), International Practice Development Journal, Norway	Yes	x		x		Mental health centre.	High	Action research project which 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, United Kingdom (UK)	No	x	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, L. et al (2009), Practice Development in	No	x	x		x	Multidisciplinary staff on the process of becoming a	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	PDU accreditation can have a positive influence on team working, evidence-based practice and improving

Health Care, UK						PDU.		interviews. 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.	opportunities for professional development.
Cambron & Cain (2004), Creative Nursing, United States of America	Yes	x				Palliative Care service on becoming a PDU.	NA	Reflections of a project which 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 of team approach using PD methodology facilitated decentralised decision-making and empowerment of patients.
Chambers et al (2013), Journal of Psychiatric & Mental Health Nursing, UK	Yes			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 program was part of a wider three-phase study and was evaluated using well-defined/described formal measures of evaluation.	The PD program led to gains for participants. However, study was ongoing.
Covill & Hope (2012), British Journal of Community Nursing, UK	Yes	x	x	x	x	PD as a framework for multi-profession working.	Low	Case study on change of practice in falls reduction within a localised community setting using a PD framework and facilitated by leaders of PD within a university setting. Identified that PD frameworks are conducive to developing leadership and management roles within a democratic process and potential for multiprofessional PD within the locality and further afield. No stated clinical outcomes of the program (such as % of falls in the Unit).	Single case study design which highlights the requirements for a multiprofessional approach to reflect real experience.
Devenny & 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 & 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 program 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 value.
Hunnisett (2011), International Practice Development Journal, UK	Yes	x				Re-enablement unit for older people.	NA	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	Mental health trust.	Low	Star Wards and The Productive Ward programs described. In the study, occupational therapists were involved in the Star Wards program. Some outcomes were reported, however there was no substantiating evidence in relation to baseline and post-program 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	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 program; clinical psychologist facilitated. Program described the application of several core PD methodologies.	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		x	NHS hospital clinical settings.	High	Explored the impact of PD versus service improvement approaches on healthcare practitioners by comparing two team projects (an aged-care ward exercise program and improving mealtime experiences for older people). 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.
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 (eg Carers Assessment of Managing Index (Nolan et al., 1995)).	No measures were reported in this paper which limited applicability.
Walsh, M., & Walsh, A. (1998). Practice development units: a study of teamwork. Nursing Standard, UK	Yes	x				Teamwork was a critical factor in a surgical unit becoming a PDU.	Moderate	The Team Climate Inventory (Anderson and West, 1996) 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 moving to become a PDU. Study limitations were described.	Team diagnostics in relation to PD is of importance.

APPENDIX 2: Participant Information and Consent Form

Allied Health Leadership Development Study –

Information for Potential Participants

INVITATION

Thank you for your interest in potentially being involved in a research project aimed at testing the effectiveness of a Practice Development intervention as an enabler of allied health leadership development.

The study is being conducted by Trish Bradd, Director Allied Health, South Eastern Sydney Local Health District (SESLHD) as Principal Investigator in conjunction with the University of New South Wales.

This sheet aims to provide you with information in relation to the proposed Project, including what would be required from you as a study participant should you elect to be involved. Further information about the Project and your role as potential participant will be provided at teleconference or face to face information sessions.

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

1. 'What is the purpose of this study?'

Practice development (PD) is an approach used in the NSW Health system and across the world as a way to optimise processes of healthcare service improvement and change (Dewing 2008). With its origins in critical social science (Boomer and McCormack 2010), PD is defined as a facilitated process that, through authentic engagement with individuals and teams, aims to promote person-centred and evidence-based health care. The PD process embraces clinical practice skills and wisdom and leads to the transforming of individual and team practices (Manley et al 2008, p. 9). Transformational leadership is a central construct of PD (Solman and Fitzgerald 2008).

One example of practice development methods used in NSW is the NSW Health 'Essentials of Care Program'.

This project aims to implement a PD- based leadership program directed to enhancing systems of clinical governance leading to better patient care. The project will investigate the area of leadership development of allied health practitioners, currently an area of limited investigation nationally, and will link this to healthcare quality and safety outcomes. The anticipated results will have wide-spread relevance for allied health services.

This study will aim to:

a) Evaluate the implementation of a PD leadership program which involves leadership training and Action Learning Sets for allied health leaders.
b) Determine whether the program led to demonstrable practice change and service improvement.
c) Ascertain whether the program led to measurable improvement in clinical governance, including specified measures of quality and safety.

A conclusion will be provided in relation to the effectiveness of the practice development methodology used on the basis of analysis of the above results and conclusions.

2. 'Why have I been invited to participate in this study?'

You have been invited to participate in this study because you are a senior allied health practitioner who has a role in supervising two or more allied health staff from your discipline.

3. 'What if I don't want to take part in this study, or if I want to withdraw later?'

Participation in this study is voluntary. It is completely up to you whether or not you participate. Your decision whether or not to participate will not prejudice your future relations with the University of New South Wales and South Eastern Sydney Local Health District.

If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason and without prejudice.

4. 'What does this study involve?'

If you agree to participate in this study, you will be asked to sign the Participant Consent Form.

Should you elect to be involved in the study, you will be assigned a study enrolment number (project code) by the Principal Investigator and then randomly assigned by an independent person to **one of three groups**:

a) CONTROL GROUP: Usual practice / no additional intervention

This means that you will agree to participate in pre- and post-project measures in relation to your leadership skills but will not undertake the leadership development program or be involved in the Action Learning Sets.

b) INTERVENTION GROUP 1: Team involved in the Leadership Development program

This means that you will agree to participate in pre- and post-project measures in relation to your leadership skills and will undertake the twelve-month leadership development program and be involved in the Action Learning Sets.

c) INTERVENTION GROUP 2: Team involved in Leadership Development program and the allied health leader is also involved in individual leadership development via coaching

This means that you will agree to participate in pre- and post-project measures in relation to your leadership skills and will undertake the leadership development program and be involved in the Action Learning Sets. In addition to this, you will agree to be given additional support through one on one coaching throughout the project.

Other measures taken at the beginning and the end of the project for all participants include:

- Measures in relation to team engagement and performance within the selected cohort
- Measures in relation to clinical governance (quality and safety) performance of each of the teams involved in the study
- Feedback from clients/patients of each clinical team

The study will take place over an 18 month period and, should you be selected to be involved in the Leadership Development Program, will require your attendance at face-to-face sessions and your participation in Action Learning Sets. The project also requires you to complete a Quality and Safety project within your team. You will also agree to undertake specific tasks with your teams using practice development methodology.

The anticipated time commitment required for the Leadership Development Program is as followed:

- Session 1 – Introduction to practice development and Action Learning Sets (ALS), including personal goals and group values (1 day session)
- Session 2: Facilitation skills (1-2 day session)

- Sessions 3-7: Leadership topics which may include topics such as managing for performance, leadership styles, building high performance teams (up to four half-day sessions)
- Session 8: Evaluation and future directions (I half-day session)
- Ad hoc individual and team training as required (identified from participants and their teams)

Please note that some group conversations will be audio recorded and scribed as part of the group process of the study.

Please be aware that approval to participate will additionally require the endorsement of your Director of Operations/ Executive Director. This is due to the time you will need to commit to attend the Action Learning Sets and training days involved in the Program.

5. 'Will I benefit from the study?'

This study aims to further knowledge about effective ways to develop the leadership skills of allied health professionals. It is anticipated that this will improve the quality and effectiveness of future leadership education programs for senior allied health practitioners in turn leading to better patient care.

Should the study leadership development program prove effective, subjects selected in the control group will have the opportunity to participate in future programs, should they be supported by their operational manager to do so.

6. 'Will taking part in this study cost me anything, and will I be paid?

Participation in this study will not personally cost you anything and will be conducted within work hours.

7. 'How will my confidentiality be protected?'

Once identified as suitable candidates for inclusion in the research, subjects will be assigned a study enrolment number (project code) by the Principal Investigator. All documents will be coded, with no names of individuals to be used when storing information about the study.

Any information that is obtained in connection with this study and that could potentially be identified with you or your allied health discipline will remain confidential and will be disclosed only with your permission or as required by law.

8. 'What happens with the results?'

If you give us your permission by signing the consent document, results from the study will be analysed and reported as part of a Higher Research Degree. Research findings will be communicated with the South Eastern Sydney Local Health District Executive and relevant Allied Health committees. Results will also be shared with study participants.

We also plan to publish findings in peer-reviewed journals, presentations at conferences or other professional forums. In any publication, information will be provided in such a way that you cannot be identified.

9. 'What should I do if I want to discuss this study further before I decide?'

When you have read this information, Trish Bradd will discuss it with you and endeavour to address any queries you may have. If you would like to know more at any stage, please do not hesitate to contact her - Patricia.Bradd@sesiahs.health.nsw.gov.au , mobile [redacted]

10. 'Who should I contact if I have concerns about the conduct of this study?'

This study has been approved by South Eastern Sydney Local Health District Human Research Ethics Committee (HREC) and the University of NSW HREC. Any person with concerns or complaints about the conduct of this study should contact the Research Support Office which is nominated to receive complaints from research participants. You should contact them on 02 9382 3587; email RSOseslhd@sesiahs.health.nsw.gov.au and quote HREC Reference 14/005.

Complaints may also be directed to the Ethics Secretariat, The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone (02) 9385 4234, fax (02) 9385 6648, email ethics.gmo@unsw.edu.au). Any complaint you make will be investigated promptly and you will be informed out the outcome.

If you suffer any distress or psychological injury as a result of this research project, you should contact the research team as soon as possible. You will be assisted with arranging appropriate treatment and support.

If you require treatment or suffer loss as a result of the negligence of any of the parties involved in the study you may be entitled to compensation; the cost of your treatment would have to be paid out of such compensation.

Thank you for taking the time to consider this study. If you wish to take part in it, please sign the following consent form.

This information sheet is for you to keep. You will also be given a copy of the *Participant Information Statement and Consent Form*.

PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM

NSW Allied Health Leadership Development Project

You are making a decision whether or not to participate. Your signature indicates that, having read the information provided above, you have decided to participate.

.....	.....
Signature of Research Participant	Signature of Witness
.....	.....
(Please PRINT name)	(Please PRINT name)
.....	.....
Date	Nature of Witness

REVOCATION OF CONSENT

NSW Allied Health Leadership Development Project

I hereby wish to **WITHDRAW** my consent to participate in the research proposal described above and understand that such withdrawal **WILL NOT** jeopardise any treatment or my relationship with The University of New South Wales and South Eastern Sydney Local Health District.

....

Signature Date

.....

Please PRINT Name

The section for Revocation of Consent should be forwarded to Patricia Bradd, Director Allied Health, District Executive Unit, Level 4, Sutherland Hospital, Locked Mail Bag 21, Taren Point, NSW 2229.

APPENDIX 3: Mind Garden™ Authorisation to use the Multifactor Leadership Questionnaire (Avolio and Bass)

mind garden

www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material;

Instrument: ***Multifactor Leadership Questionnaire***

Authors: ***Bruce Avolio and Bernard Bass***

Copyright: ***1995 by Bruce Avolio and Bernard Bass***

for his/her thesis research.

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Production Note:
Signature removed prior to publication.

Robert Most
Mind Garden, Inc.
www.mindgarden.com

APPENDIX 4: South Eastern Sydney Local Health District Allied Health Leadership Development Program Evaluation Forms

ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM – Workshop 1 - PRE WORKSHOP SURVEY

DATE:

Your response to the following questions will enable us to determine the effectiveness of the training workshop for your learning.

1. **Please indicate your current knowledge of about Practice Development**

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

2. **Please indicate your current knowledge of about leadership**

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

3. **Please indicate your current knowledge of about quality and safety**

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Please list up to three (3) personal goals for this workshop (what you would specifically like to learn and/or the skills you would like to develop as a result of participating in this workshop).

1.
2.
3.

Thank you for completing this questionnaire

ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM –

Workshop 1 - POST WORKSHOP SURVEY

DATE:

SECTION A: PARTICIPANT EXPERIENCE

Your responses to the following questions will enable us to evaluate the program and improve it for the future.

Please indicate your degree of agreement with the following statements.

	Agree with Statement					
		Strongly Disagree				Strongly Agree
	N/A	1	2	3	4	5
The workshop was well organised	○	○	○	○	○	○
The goals for this workshop were clearly stated	○	○	○	○	○	○
The content was clearly presented	○	○	○	○	○	○
Overall I was satisfied with the quality of this workshop	○	○	○	○	○	○
I would recommend this workshop to my colleagues	○	○	○	○	○	○

Please rate the content of the workshop (circle your response).

	Not at all					Very
	N/A	1	2	3	4	5
How **relevant** was the content to your current role?	○	○	○	○	○	○
How **interesting** did you find the workshop overall?	○	○	○	○	○	○
How high was the **quality** of the workshop overall?	○	○	○	○	○	○
How much will your **practice** change as a result of the workshop?	○	○	○	○	○	○

Are there any additional areas of knowledge will you pursue following this workshop?

1.

2.

3.

GENERAL FEEDBACK

What were the most useful aspects of this workshop for you?

What were the least useful aspects of this workshop for you?

Do you have any other suggestions to improve the workshop?

Do you have any other comments?

SECTION B: LEARNING OUTCOMES: Your response to the following questions will enable us to determine the effectiveness of the training workshop for your learning.

Please indicate your current knowledge of about Practice Development

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Please indicate your current knowledge of about leadership

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Please indicate your current knowledge of about quality and safety.

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Look at the list of the three (3) personal learning goals you identified for yourself at the beginning of this workshop. How well did the workshop cover your goals?

		Not at all				**Very**
	N/A	**1**	**2**	**3**	**4**	**5**
Please write your goals below:						
Goal 1:	○	○	○	○	○	○
Goal 2:	○	○	○	○	○	○
Goal 3:	○	○	○	○	○	○

Thank you for completing this questionnaire

Health
South Eastern Sydney
Local Health District

ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM – Workshops 2 & 3 - PRE WORKSHOP SURVEY

DATE: **INITIALS: _____**

Your response to the following questions will enable us to determine the effectiveness of the training workshop for your learning.

1. **Please indicate your current knowledge of about facilitation**

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

2. **Please indicate your current knowledge of about practice development**

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

3. **Please indicate your current knowledge of about leadership**

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Please list <u>up to</u> three (3) personal goals for this workshop (what you would specifically like to learn and/or the skills you would like to develop as a result of participating in this workshop).

1.
2.
3.

Thank you for completing this questionnaire

Health
South Eastern Sydney
Local Health District

ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM –

Workshops 2 & 3 - POST WORKSHOP SURVEY

DATE: **INITIALS: _____**

SECTION A: PARTICIPANT EXPERIENCE

Your responses to the following questions will enable us to evaluate the program and improve it for the future.

Please indicate your degree of agreement with the following statements.

	Agree with Statement					
		Strongly Disagree				Strongly Agree
	N/A	1	2	3	4	5
The workshop was well organised	○	○	○	○	○	○
The goals for this workshop were clearly stated	○	○	○	○	○	○
The content was clearly presented	○	○	○	○	○	○
Overall I was satisfied with the quality of this workshop	○	○	○	○	○	○
I would recommend this workshop to my colleagues	○	○	○	○	○	○

Please rate the content of the workshop (circle your response).

		Not at all				Very
	N/A	1	2	3	4	5
How **relevant** was the content to your current role?	○	○	○	○	○	○
How **interesting** did you find the workshop overall?	○	○	○	○	○	○
How high was the **quality** of the workshop overall?	○	○	○	○	○	○
How much will your **practice** change as a result of the workshop?	○	○	○	○	○	○

Are there any additional areas of knowledge will you pursue following this workshop?

1.

2.

3.

GENERAL FEEDBACK

What were the most useful aspects of this workshop for you?

What were the least useful aspects of this workshop for you?

Do you have any other suggestions to improve the workshop?

Do you have any other comments?

SECTION B: LEARNING OUTCOMES: Your response to the following questions will enable us to determine the effectiveness of the training workshop for your learning.

Please indicate your current knowledge of about facilitation

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Please indicate your current knowledge of about Practice Development

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Please indicate your current knowledge of about leadership

Very little or no knowledge		Moderately knowledgeable		Extremely knowledgeable
1	2	3	4	5

Look at the list of the three (3) personal learning goals you identified for yourself at the beginning of this workshop. How well did the workshop cover your goals?

		Not at all				**Very**
	N/A	**1**	**2**	**3**	**4**	**5**
Please write your goals below:						
Goal 1:	○	○	○	○	○	○
Goal 2:	○	○	○	○	○	○
Goal 3:	○	○	○	○	○	○

Thank you for completing this questionnaire

ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM

ACTION LEARNING SET – QUESTIONNAIRE

Date:

Your response to the following questions will enable us to determine the effectiveness of the Action Learning Sets for facilitating growth and learning. All responses will be treated confidentially.

Please comment on the tutorial

_____

_____

How many Action Learning Sets have you attended so far? _____

Did you have an issue that you could present at the session today? YES / NO

_____

Please give a rating of 0 (low) to 5 (high) to the following items:

BEFORE THE SESSION TODAY:

1. **Please rate your confidence in facilitation**

Very low		Moderately high		Extremely high
1	2	3	4	5

2. **Please rate your confidence in asking enabling questions**

Very low		Moderately high		Extremely high
1	2	3	4	5

3. **Please rate your confidence in presenting an issue**

Very low		Moderately high		Extremely high
1	2	3	4	5

AFTER THE SESSION TODAY:

4. **Please rate your confidence in facilitation**

Very low		Moderately high		Extremely high
1	2	3	4	5

5. **Please rate your confidence in asking enabling questions**

Very low		Moderately high		Extremely high
1	2	3	4	5

6. **Please rate your confidence in presenting an issue**

Very low		Moderately high		Extremely high
1	2	3	4	5

What were the most useful aspects of the Action Learning Set for you?

What were the least useful aspects of the Action Learning Set for you?

What was one insight that you discovered today?

Do you have any other comments or suggestions?

ALLIED HEALTH LEADERSHIP DEVELOPMENT PROGRAM

QUESTIONNAIRE

Date:

Your responses to the following questions will enable us to determine the effectiveness of the Allied Health Leadership Development Program for facilitating growth and learning. All responses will be treated confidentially.

1. **How would you rate the *Allied Health Leadership Development Program* overall?**

Poor	Average	Good	Very good	Excellent
1	2	3	4	5

2. **Please comment on which aspects of the program were of most use to you in your current role**

_____

_____

_____

3. **Tell us about which of the following program components was of benefit to you. Please give a rating of 0 (low) to 5 (high) to the following items:**

Learning about practice development **1 2 3 4 5**

Understanding of leadership **1 2 3 4 5**

Development of facilitation skills **1 2 3 4 5**

Confidence in using enabling questions **1 2 3 4 5**

Engaging in Action Learning Sets **1 2 3 4 5**

Understanding person-centred approaches **1 2 3 4 5**

Developing project management skills **1 2 3 4 5**

Understanding of clinical practice improvement **1 2 3 4 5**

Understanding sustainability	**1 2 3 4 5**
Understanding of critical enquiry	**1 2 3 4 5**
Opportunity to network with others	**1 2 3 4 5**
Opportunity to learn and share with peers	**1 2 3 4 5**
Development of project skills	**1 2 3 4 5**
Development of team based skills	**1 2 3 4 5**
Understanding your scope of influence	**1 2 3 4 5**

4. **Tell us about how the program helped you to facilitate others towards a change in your workplace?**

   _____
   _____
   _____

5. **In what ways has your learning affected:**
   a. **You?**

      _____
      _____

   b. **Your team?**

      _____
      _____

   c. **Your colleagues?**

      _____
      _____

6. **Are there ways that you think your learning has affected service delivery or patient care?**

   _____
   _____
   _____

7. **Having completed the program, has there been benefit to your development as a leader?**

   _____

   If so, what was the single most important benefit for you personally?

   _____
   _____
   _____

8. **If relevant, please describe any beneficial changes that you have noticed in others you work with since you attended the course.**

   _____
   _____
   _____

9. **Do you have ideas about how the program overall could be improved for future participants?**

   _____
   _____
   _____

10. **Do you have any other comments or suggestions?**

    _____
    _____
    _____

Thank you so much for completing this feedback and for being a member of the Allied Health Leadership Development Program

APPENDIX 5: Description of the South Eastern Sydney Local Health District Leadership Program, including theoretical underpinnings

This section outlines the SESLHD Allied Health Leadership Development Program in more detail. It describes the content covered at each workshop and Action Learning Set (ALS), as well as the rationale for each activity. It also provides more detailed information about the theories that were used in the design of the program.

The Allied Health Leadership Program - Sessions 1 and 2: Workshop Days

The Leadership Program comprised two sessions over three days. A description of the elements of the workshop days can be found in Chapter 6.

The outline of the structure and format of session 1 (workshop 1) and session 2 (workshop 2 and workshop 3), including approximate time allocation, activity and rationale, are detailed in Tables 1, 2 and 3.

Session 1 - WORKSHOP 1

TIME	ACTIVITY	RATIONALE
900am	**Welcome and introductions**	
30 minutes	Name and introductions. Overview of research project, including aims and roles Ice breaker activity Pre-workshop questionnaire	Promote an environment of inclusivity and participation Enhanced group cohesion
930am		
10 minutes	Participants to jointly determine "what would constitute a successful program"? -Form small groups to share and theme these (2-3 small groups)	Promote a shared understanding of each other's goals and perspectives in order to develop a shared purpose. Small groups to enable greater individual involvement
10 minutes	Participants to jointly develop "agreed ways in which we need to work as a group"? -Form small groups to share and theme these (2-3 small groups)	Clearly outline the agreed expected behaviours amongst group members over the course of the program
10 minutes	Participants to jointly develop our group values for the program:	Values determine what is important to the group from the outset and assist with providing a

	- Individuals to identify workplace values of importance to them (post-it notes) - Form small groups to share and theme these	'point of reference' for the group
15 minutes	Group feedback and discussion. Agreed overall points in each of the above 3 areas.	Whole of group agreement to values, ways of working and workshop objectives.
1015am	***Morning tea***	
1030am		
90 minutes	What is practice development (PD): • Purpose of PD • Definition • PD principles • Enlightenment, empowerment, emancipation • Theoretical underpinnings • How is it used currently in NSW Introduction to Action Learning Set approach for this project	Development of group's foundational understanding of PD Discussion in relation to Action Learning Set approach used in the project, as well as principles of Participatory Action Research (PAR) as underpinning shared approach and participant input.
30 minutes	Applied examples of PD and group discussion about PD using FONS resources	Increase awareness of application of PD in clinical settings
1230pm	***Lunch***	
115pm	Recap of previous session Any additional questions	Build sense of cohesion; ensure understanding; clarify any concerns
130pm	**Governance and Leadership in Health**	
20 minutes	• Definitions of leadership from the group • Discussion of what constitutes effective leadership	Development of group's foundational understanding of leadership
10 minutes	Introduction to governance	Shared understanding of the role of governance in patient care and team effectiveness
30 minutes	Leadership: • Types of leadership • Defining leadership • Leadership in healthcare – Health LEADS framework (Health Workforce Australia, 2013)	Theoretical underpinnings of leadership Introduction to Health LEADS (Health Workforce Australia, 2013)
30 minutes	Small group discussion:	Increased applicability and

	• Share stories of excellent leadership	personal relevance
300pm	***Short break***	
315pm	**The Journey Ahead**	
30 minutes	Managing yourself over the course of the project, including • reflective practice • reflective journaling • goal setting	Promote clarity of roles and responsibilities across the term of the project
	Outline of the PD project – what is required	Discussion of the deliverable of the project. Allow discussion and joint development of what would be acceptable as part of PAR process
	Involving consumers – the process of patient stories	Introduction of patients as partners and patient directed care concepts, critical for the development of future quality project.
	Introduction to knowing self - Values in Action (VIA) survey	VIA aims to assist participants to know self and personal strengths better
345pm – 400pm	**Finish and Evaluation**	
	Final group discussion: Wrap up of the day	Derive a sense of how the day went.
	Outline of Day's 2 and 3	Opportunity to prepare participants for what is coming and the topic to be covered
	Post-workshop evaluation	

Table 1 – Outline of Session One - Workshop One, with rationales

Session 2 - WORKSHOP 2

TIME	ACTIVITY	RATIONALE
900am	**Welcome and introductions**	
30 minutes	• Introductions, acknowledgements and housekeeping • Pre-workshop questionnaire • Proposed overview for today Seek agreement for the proposed structure of workshop activities • Review / discussion of group ways of working, values – additions? Amendments? Do they reflect the group? Any claims / concerns / issues from Day 1 • Recap of homework from Day 1 • Ice breaker activity – *Values in Action Survey* results in pairs • Reminder/discussion – what is the heart of our practice in allied health?	Promote an environment of inclusivity and participation Enhanced group cohesion Reminder of the agreed expected behaviours amongst group members over the course of the program Promote a shared understanding of shared purpose of the workshops. Small groups to enable greater individual involvement
930am	**Group session – Facilitation Development Program**	
15 minutes	Introduction to the next two days – Facilitation Development Discuss in two groups • What is facilitation? (definition) • How is it used by Allied Health? • Personal reflection – directed vs assistance - A time when they may have been directed to do something vs another time when they have been assisted to learn something - Benefits of one vs another approach; consequences of this - Nature of the change (sustainable) - Claims about what they know and the skills they have in facilitation • Discuss in pairs responses to the	Development of group's foundational understanding of facilitation as a tool of PD, this is fundamental to the program Relate to AH to add personal relevance Reflective learning approach. Focus on change readiness of self and team (this will influence success of the role) Paired work to enable greater individual involvement and greater safety in refection

	questions Share results in larger group	
20 minutes	Overview of facilitation in PD Review of practice development: • Any insights from readings • Engaging with the 9 principles: large group discussion	Development of group's foundational understanding of facilitation as a tool of PD.
1005am	**Enabling Effective Conversations:** **Enabling Questions**	
10 minutes	An introduction to enabling questions. • What do you think are some of the characteristics of enabling questions? • Nature of questions, Herons categories.	Development of groups' understanding of the effective use of questioning as a tool of PD. Introduction to Herons categories of intervention and their application in practice
1015am	***Morning tea***	
1030am		
60 minutes	Concepts of enabling questioning and how it supports reflection and action. Activity: In groups of 3-4: Assign • Presenter • Enabler • Observer/s • Presenter choose an issue to discuss • Rotate roles (10 mins each) Group task - Brief critical discussion about roles and processes Appreciative Dialogue and Caring Conversations – information on slides	Further applied use of effective questioning through group activity
1130am		
30 minutes	Group task: • Close your eyes for a moment. • Imagine a vision of a perfect workplace culture. • What would that look like? • Capture your thoughts on the butchers paper	Building effective workplace cultures is a fundamental aspect to PD Circle of Concern/Circle of Influence to draw attention to what can be changed and possible next steps Brainstorm – aim to collect information that could possibly be used to develop a model for AH (Thinking about PCC specifically in

	Circle of Concern/Circle of Influence BRAINSTORM: What are the shared principles we have underpinning person-centred care in AH practice?	allied health services has not been well-captured)
1200pm		
5 minutes **10 minutes** **15 minutes**	WHOLE GROUP DISCUSSION (5 minutes) • What is your experience of feedback? • Formal and informal mechanisms • Individual versus groups • What works? What doesn't? ROLE PLAY in TRIADS 1 of 2 scenarios • One person plays the Staff Member • One person plays the Manager • Third person is the Observer *SCENARIO 1: The manager has received a complaint about how one of the senior staff is treating new graduate, OR* *SCENARIO 2: The manager has a concern about an area of poor practice for one of the staff* Form 5 groups - SCARF Brainstorm strategies to enhance reward / reduce threats	Develop the groups' understanding of what constitutes effective and ineffective feedback Practical application of SCARF to promote greater insight and learning to own context and to self
1230pm	***Lunch***	
115pm	Recap of previous session Any additional questions	Build sense of cohesion; ensure understanding; clarify any concerns
130pm		
	Prochaska and DiClemente's Stages of Change Model (1984)	Theoretical underpinnings of change
	Reflect on an example of something you want to change. What would it take for you to move from your current stage to the next one? What do you need to achieve this?	Reflective learning approach. Focus on change readiness of self and team (this will influence success of the role)
200pm	**Practice Development Tools**	
60 minutes	Clarifying values and workplace culture • Work through how a values	Increase understanding of tools of PD that can be applied to teams in

	clarification task might be undertaken in a team	clinical settings
	Claims, concerns and issues • Using the template, work through an example	Increase understanding of tools of PD that can be applied to teams in clinical settings
230pm	**FACILITATION: Putting it all together…**	
	Reminder – facilitation as a core construct of PD	Aim to reinforce theory of facilitation and its role in PD approaches
	Stages of facilitation	Introduce theory to the stages of facilitation development
	Purpose of facilitation	Recap of role of facilitator
	Becoming a facilitator	Outline of personal development as a facilitator
300pm	***Short break***	
315pm	**Leadership and PD**	
30 minutes	Revision of leadership principles	Development of groups' understanding of leadership
	Leadership and management: BRAINSTORM some of differences according to the group (whole group activity)	Build on groups' understanding of leadership.
	Specific link between leadership and PD	Build relevance of leadership to PD
	Brief recap of Health LEADS (reference session 1)	LEAD is framework for the program
345pm – 400pm	**Finish and Evaluation**	
	Creatively sharing key learning about facilitation	Derive a sense of how the day went. Opportunity for participants to engage creatively – a principle of PD
	Outline of Day 3 Show Empathy: The Human Connection to Patient Care *Cleveland Clinic* YouTube to finish https://www.youtube.com/watch?v=cDDWvj_q-o8	Opportunity to prepare participants for what is coming and the topic to be covered. YouTube – visual exemplar of Person-centred care
	Post-workshop evaluation	Questionnaire

Table 2 – Outline of Session Two - Workshop Two, with rationales

Session 2 - WORKSHOP 3

TIME	ACTIVITY	RATIONALE
900am:	**Welcome and introductions**	
20 minutes	• Introductions and housekeeping • Recap of Day 2 – key learnings • Review / discussion of group ways of working, values – additions? Amendments? Do they reflect the group? • Any claims / concerns / issues from Day 2	Promote an environment of inclusivity and participation Enhanced group cohesion Reminder of the agreed expected behaviours amongst group members over the course of the program Promote a shared understanding of shared purpose of the workshops.
920am	**Facilitation Development Program**	
20 minutes	Review of Day 1: • Facilitation in Practice Development • Enabling effective conversations • Enabling for effective cultures • Enabling effective feedback • Enabling change through PD • PD tools TASK: Tell a story about one or two observations of the practice within your team and clinical environment. What did you notice about culture and person-centred care?	Recap of PD and its principles. Recap if PD tools and application in practice. Story-telling as an enabler of learning.
940am	**Exploring some of the principles of PD**	
20 minutes	Use of evidence in and on practice • Theoretical basis • Group work: What do you think constitutes evidence? How do we currently incorporate evidence into practice? How we do we currently use our clinical experience to inform practice? How do we currently utilise patient information to guide and inform our practice?	Small groups to enable greater individual involvement Reflective learning approach. Focus on change readiness of self and team.
15	Group feedback and discussion	Build on the groups understanding of

minutes		PD.
1015am	***Morning tea***	
1030am		
25 minutes	Introduction to active learning • Theoretical basis GROUP DISCUSSION: • What are some ways we could better incorporate learning into the clinical workspace?	Increase understanding of principles of PD that can be applied to teams in clinical settings
15 minutes	Personal reflective review • How would others understand your leadership role? • What internal and external factors will help or hinder you in the process of active learning? • What are the main themes that emerge for you? • What is your learning from the process? • What are the work themes that you need to address for the future?	Reflective learning approach. Focus on change readiness of self and team (this will influence success of the role)
1110am		
30 minutes	Introduction to evaluation in PD • Theoretical basis • Tools (eg 360 feedback, reflection) • Workplace Culture Critical Analysis Tool • Patient stories collection techniques and template • Analysis and theming	Introduce theory to the evaluation as a core element of PD and of successful change
30 minutes	Introduction to PRAXIS • Purpose • Reflexivity: • Approaches: • Context: • Intent • Stakeholders	Increase understanding of tools of PD that can be applied to teams in clinical settings
30 minutes	Go through the steps of PRAXIS for your potential project.	Build on groups' understanding of PD tools

1230pm	***Lunch***	
115pm	Recap of previous session Any additional questions	
130pm	**Becoming an effective facilitator**	
25 minutes	• Theoretical underpinnings of knowing self / EI • Introduction to The Johari window • Learning styles	Introduce emotional intelligence as an enabler of effective leadership
20 minutes	Personal goal setting • Spend some time now thinking about 1-2 personal goals for yourself • Try to make them SMART (Specific, Measureable, Achievable, Realistic, Time framed) • Discuss your goals with a partner	Focussed time for reflection in relation to goal setting, using tools. Paired work to reinforce learning.
215pm	**Bring it all together - determining your project**	
15 minutes	• Theoretical underpinnings • Recap of PD tools and approaches	Recap of all the elements of PD (tools, approaches, relevance)
30 minutes	• Introduction to puzzling • Work through some examples as a whole group • IHI Model for Improvement • Tools from NHS Scotland • Reminder – patients as partners in project development. Involving consumers – patient stories	Introduce various approaches to project work, including puzzling, MFI with a person-centred approach
	• Summary of transformational facilitation	Review of personal development as facilitative leader
300pm	***Afternoon tea***	
315pm	**Action Learning Sets**	
30 minutes	Theoretical introduction to ALS. Usefulness.	Introduce the theory of ALS and approach we will take as part of this program.
	Dates/Topics for future ALS • Group to suggest speakers	Participants to determine topics for future ALS (PIC approach to PD)
	Outline of the PD project – what is required	

345pm – 400pm	Finish and Evaluation	
	Share key learning from today	Derive a sense of how the day went. Opportunity for participants to engage creatively – a principle of PD
	Outline of next ALS	Opportunity to prepare participants for what is coming and the topic to be covered
	Post-workshop evaluation	Questionnaire

Table 3 – Outline of Session Two - Workshop Three, with rationales

Detailed information about the theoretical underpinnings of the SESLHD Allied Health Leadership Development Program

Theoretical underpinnings of program activities: Practice development

a) Active learning

Learning in and from practice through work-based learning is a key outcome of practice development and was a goal of the Allied Health Leadership Development Program. Practice development involves a range of processes to assist learning, including critical analysis and reflection. As noted, active learning sees these and other processes used to support learning in practice development.

Learning is required for health professionals to advance their practice and is thus at the heart of practice development. Active learning is defined as 'an approach or methodology for learning that draws in, integrates and creatively synthesises numerous learning

methods' (Dewing, 2008a, p. 274). Based on the personal experience of the practitioner, active learning entails work-based learning which, in turn, involves learning in and from practice. Work-based learning is considered a context-specific, learner-centric approach achieved through a variety of processes, such as reflection, listening and questioning. It is said to result in enhanced teamwork, collaboration and shared learning (Dewing, 2010).

An important aspect of the active learning process is the full engagement of the practitioner as a person in authentic and values-based ways, leading to lasting transformation within their personal context. Active learning is not about training or teaching knowledge, nor is it taught using traditional methods. Rather, active learning is realised through practice development activities and learning opportunities that present themselves in the learner's workplace, both for the individual and in enabling the learning of others (Dewing, 2010).

Active learning creatively draws on a range of learning methods to facilitate in-depth learning and can be applied in diverse ways, such as exploring values and beliefs, enhancing teamwork and establishing routines. Implicit in the active learning process is that the practitioner is 'active' in their own learning by way of higher-order thinking, such as analysis, synthesis and evaluation. The clinical skills of the practitioner are enhanced as a consequence, thereby improving patient care and facilitating transformational learning (Dewing, 2008a; Dewing, 2010).

As a component of practice development, active learning has a range of benefits. These include its capacity to be integrated into existing professional education programs to maximise learning from complex everyday practice and workplace contexts, and its ability to enhance the effectiveness and efficiency of teaching, facilitation and learning. It also results in a higher level of learning and thinking, reportedly leading to improved retention and transfer of knowledge into practice (Dewing, 2010).

Active learning could, therefore, be viewed as a mechanism for promoting engagement, contextualised learning and enhanced effectiveness. For these reasons, active learning was considered an essential element of the SESLHD Allied Health Leadership Development Program.

b) Creativity

Practice development has embraced the construct of creativity combined with cognition as a key principle, with critical creativity seen as an important part of the practice development process (Manley et al., 2008a). Professional artistry realised through creative means can enable engagement of the mind, heart, body and spirit (Titchen & McCormack, 2008).

The use of creativity as a construct of practice development in the facilitation process was considered in constructing some of the leadership program tasks. For example, some of the program activities allowed flexibility and freedom for group participants to utilise a given source (such as craft materials, images and pictures) to describe a story or a perspective in relation to key learnings.

c) Reflective practice and reflexivity

Reflective practice is a self-regulatory process encompassing reflection, self-awareness and critical thinking. It aims to bring about greater insight into self and the situation in order to inform future actions (Clarke & Wilson, 2008; Sandars, 2009). Reflection involves processes that promote self-inquiry, self-monitoring, self-regulation and mindfulness (Johns, 2010; Mann et al., 2009). Learning effectively from personal experience using reflection is essential in developing and maintaining competence across a practice lifespan (Mann et al., 2009).

According to Johns, a 'personal way of knowing' encompasses an individual's feelings and prejudices within a situation, the management of these feelings and prejudices in responding to the situation, and the way anxiety is managed and self is sustained. Reflection on experience aims to expand a person's knowledge of self within a situation in order to make sense of the experience and to learn from it (Johns, 1995, p.229).

Reflexivity, facilitated through the use of cue questions, is thus an important aspect to assisting deeper learning to occur and is an important skill for leaders (Johns, 1995). The facilitation of reflexivity was an important group and individual activity that occurred throughout each workshop and action learning set (ALS). Further individual reflexivity was encouraged through reflective journalling and individual coaching.

d) Hermeneutics and facilitation

Gadamer (1975) described hermeneutics as 'the art of understanding text' (cited in Johns, 2010, p.12). The use of hermeneutics has been described as 'the text of our lived experiences' and links the significance of the experience ('the part') against the context of 'the whole' (Johns, 2010, p.12). The 'hermeneutic circle' is a philosophical construct and process of hermeneutics based on the idea that an understanding of the parts allows interpretation in relation to the whole. In the circle, each part gives meaning to the rest in a circular fashion (Walsh & Andersen, 2013).

Facilitation is a complex skill, especially for those new to the role (Walsh & Andersen, 2013) yet it is a key process for successful emancipatory practice development (McCormack et al., 2010). In a group scenario, hermeneutics may assist the facilitator in the interpretation of group behaviour in the context of its purpose, goals and history.

Applying the constructs of hermeneutics assisted in constructing a program for new facilitators (program participants) to enable the power of the *parts* (individual members and activities) to achieve the goals of the *whole* (their teams and their overall project). This approach also reflects that the success of the leadership program is considered to be dependent on the interrelatedness of the whole as the sum of its parts.

Theoretical underpinnings of program activities: Positive psychology

Positive psychology encompasses the investigation of positive emotions and personal characteristics and, along with study of suffering and disorder, seeks to enhance the field of psychology (Seligman et al., 2005; Seligman, 2012). Positive organisational theory focuses on constructs including resilience, hope, optimism, happiness, hope and well-being (Avolio et al., 2009).

A number of the activities utilised in the program were underpinned by positive psychology theories, such Appreciative Inquiry (Gordon, 2008), Goal Setting (Locke & Latham, 2002) and the Broaden-and-Build theory (Fredrickson & Joiner, 2002) all of which entail a positive approach to learning.

The positive psychology based theoretical underpinnings are described below.

a) Appreciative Inquiry

Appreciative Inquiry (AI) is a positive, strengths-based approach to learning, development and change that stipulates a positive approach involving a cycle of discovering (appreciation), dreaming (envisioning), designing (the idea) and destiny (empowerment and sustainability). An AI approach can assist in establishing the development of a positive perspective and direction for the future (Gordon, 2008; Orem et al., 2007).

Developed by Cooperrider and Srivastva (1987) (cited in Richer et al., 2010), AI builds on the core aspirations that exist within an individual or a group striving to achieve collective goals. It seeks and builds on success stories where individuals and groups felt the most alive and effective (Richer et al., 2010). In essence, it is about allowing people to tell their stories, share in their envisioning and thereafter co-construct a better future (Moore, 2008).

The leadership program utilised activities that have their theoretical origins in AI and sought to effectively use the elements of AI in practice. Activities included recounting a 'high point' story and undertaking tasks where questions were framed in a positive way. The workshop tasks and ALS allowed people to share the story of their leadership journeys in ways that were reinforcing and supportive and that frequently stimulated a future focus.

b) Goal setting and self-concordance theories

Goal setting theory describes the core properties of an effective goal (specificity and difficulty) and their application in work settings. It discusses the importance of setting goals and suggests that difficult and specific goals lead to high effort and performance (Locke & Latham, 2002). A leader should, therefore, invest time in supporting their staff to develop goals as well as setting goals themselves (Kouzes & Posner, 2007).

Setting clear, just-manageable goals helps the person to become absorbed and attend to the activity. These goals can be 'intrinsically motivating' and rewards in themselves, thus leading to growth (Nakamura & Csikszentmihalyi, 2002, p.80). It is also said that feedback about progress is important to remaining in 'flow' (Nakamura & Csikszentmihalyi, 2002).

Goal setting theory aligns with self-concordance theory (Sheldon & Elliot, 1999; Sheldon et al., 2004). Self-concordance is enhanced when goals are consistent with a person's

interest and core values. People are said to act self-concordantly when their life direction is 'right and fulfilling for them' (Burke & Linley, 2007, p.63).

The Allied Health Leadership Development Program aimed to assist participants to identify and set goals for themselves and their team at multiple stages throughout the program. The coaching support provided to some as part of their leadership program also aimed to assist the individual set purposeful goals.

c) Broaden-and-build theory

Broaden-and-build theory describes how achieving positive gains leads to broadened thinking that results in better, more durable and resilient outcomes (Fredrickson & Joiner, 2002; Fredrickson & Branigan, 2005). Actions, attitudes and connections that are positive influence long-term change; the greater the positivity of these elements, the more lasting the change (Orem et al., 2007).

It is also said that where there are positive feelings, thinking can become more creative, integrative and open (Fredrickson & Branigan, 2005). The program aimed to engage with the positive feelings expressed by individuals as they shared their stories and achieved their leadership aims.

d) Self-determination theory

With a focus on internal causation and the loci for motivation, self-determination theory is said to assist the understanding of human motivation (Deci & Ryan, 1985; Spence & Oades, 2011). Motivation in this context has been defined as 'that which moves people to act' (Ryan et al., 2011).

Self-determination theory proposes that a person who acts autonomously and voluntarily (i.e. according to self-endorsed goals) produces better outcomes than if they are compelled to act (Sheldon et al., 2004; Ryan & Deci, 2001). As suggested by Ryan and colleagues, 'once people are volitionally engaged and have a high degree of willingness to act, they are then most apt to learn and apply new strategies and competencies' (Ryan et al., 2011, p.231).

In the context of the leadership program, leaders develop skills in facilitating the involvement of others such that they engage voluntarily. In practice development, this aligns with the principles of participation, inclusion and collaboration, all essential elements in developing cultures that are person-centred (Manley, 2017).

Theoretical underpinnings of program activities: Analysis of the group – The Group Effectiveness Model

A work group has been described as having 'collective responsibility for performing one or more tasks' with an assessable outcome (Schwarz, 2002, p.19). The *Group Effectiveness Model* describes elements that make a group more effective, including context (such as physical culture and supportive environment), process (such as communication, problem-solving, decision-making and conflict management) and structure (such as membership, goals, norms and role) (Schwarz, 2002).

Several aspects of group theory were considered in the program design.

a) *Group Effectiveness:* Elements pertaining to group effectiveness were considered in determining group arrangements, including the establishment of group values and norms, the room set-up, the familiarity of the group and the equal spread of input and positional power across allied health disciplines and grading. There was also consideration given to ensure balance across whole-group, small-group and individual tasks within the program, to ensure maximal input and learning throughout the program.

b) *Group Discussions:* Discussions are an active, learner-centred process that can be useful for teaching and learning in a group (Killen, 2007). Group discussions in the program involved talking, listening and responding within a group and an exchange of ideas within a cooperative, supportive environment. Focusing whole-group discussions on the outcomes to be achieved is said to be an important element of effective groups and was thus incorporated into the program design (Killen, 2007).

   The leadership program employed activities that involved whole-group and small-group discussion. In this way, the program modelled options for group discussion for participants as they sought to facilitate the project with their own local teams/groups.

c) *Group Dynamics:* In considering group effectiveness, there are a range of interacting influences on group dynamics that affect functioning. These include the complexity of the task and the diversity of the group, processes, outcome and feedback (de Lichtenberg & London, 2008). Group dynamics and their influence on the facilitation process were extensively discussed as part of the program and during the ALSs as participants moved to project implementation.

Theoretical underpinnings of program activities: Coaching

Coaching is a solution-focused approach used to assist people to retrieve and utilise their personal experiences, skills, intuition and expertise in order to find creative, individual solution to work and personal life situations (Greene & Grant, 2003). A collaborative process, it aims to improve performance, well-being and the ability of the individual to learn independently (Grant & Cavanagh, 2007). It also aims to empower and encourage the coachee to develop goals aligned with their inner values (Greene & Grant, 2003).

There are well-researched links between employee well-being and workplace productivity (Britton, 2008). It is suggested that workplace coaching includes coaching on-the-job by managers in order to improve productivity and develop the skills of the individual worker (Cavanagh & Grant, 2004). Coaching within the healthcare setting may also improve employee performance, well-being and proactivity (Yu et al., 2008).

There are a range of coaching approaches used by coaching psychologists, including facilitation, goal-focused, solution-focused and person-centred (Palmer & Whybrow, 2006). Theoretical perspectives utilised by coaches include developmental, cognitive, solution-focused and behavioural theories, with each of these theoretical frameworks placing a different emphasis on the understanding and formulation of the presenting issue. Some authors suggesting that, rather than adopting one specific theoretical approach, the coach should be collaborative and adopt the approach that is best for each person (Grant, 2004).

Five empirically validated interventions and theories leading to enhanced job satisfaction have been described (Britton, 2008):

- searching for the positive core (Appreciative Inquiry theory);
- creating positive emotions intentionally (Broaden-and-Build theory);

- increasing the conditions that enable flow (Flow Theory);
- dealing with negative situations effectively (Realistic Optimism and resilience); and
- effectively celebrating positive situations and events (positive verbal and specific praise increases effectiveness).

These are relevant to the workplace and are key elements of coaching practice.

APPENDIX 6: Low Negligible Risk and Site-Specific Approval Ethics Approval South Eastern Sydney Local Health District 2014

NSW GOVERNMENT Health
South Eastern Sydney Local Health District

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5 February 2014

Ms Patricia Bradd
Allied Health Directorate
South Eastern Sydney Local Health District
Locked Mail Bag 21
TAREN POINT NSW 2229

Dear Ms Bradd

HREC ref no: 14/005 (LNR/14/POWH/005)
Project title: Testing the effectiveness of a Practice Development intervention as an enabler of allied health leadership development: A platform for enhancing the quality and safety of allied health practice

Thank you for submitting the above Low/Negligible Risk Application for review by the Human Research Ethics Committee (HREC). Based on the information you have provided and in accordance with the NHMRC guidelines [National Statement 2007 – Section 5 Institutional Responsibilities and "*When does quality assurance in health care require independent ethical review?*" (2003)], this project has been assessed as low risk and is therefore exempt from full HREC review.

I am pleased to advise that the Executive Committee on 4 February 2014 granted ethical approval for this project to be conducted at:

- South Eastern Sydney Local Health District

The following documentation has been approved:

- Protocol, version 1.0, dated 15 January 2014
- Low/negligible risk application, submission code AU/6/1C06113, dated 15 December 2013
- Participant Information Sheet, not dated
- Participant Consent Form, not dated
- Participant Invitation Letter, version 2.0, dated January 2014
- Patient Journey Letter, not dated
- Story Collection Form, January 2014
- Collecting Patient & Carer Stories Guide, updated July 2008
- Research Matrix, January 2014

Prince of Wales Hospital
Community Health Services
Barker Street
Randwick NSW 2031

Conditions of approval

1. This approval is valid for 5 years from the date of this letter.
2. Annual reports must be provided on the anniversary of approval.
3. A final report must be provided at the completion of the project.
4. Proposed changes to the research protocol, conduct of the research, or length of approval will be provided to the Committee.
5. The Principal Investigator will immediately report matters which might warrant review of ethical approval, including unforeseen events which might affect the ethical acceptability of the project and any complaints made by study participants.

Optional It is the responsibility of the sponsor or the principal (or co-ordinating) investigator of the project to register this study on a publicly available online registry (eg Australian New Zealand Clinical Trials Registry www.anzctr.org.au).

For NSW Public Health sites only: You are reminded that this letter constitutes ethical approval only. You must not commence this research project until you have submitted your Site Specific Assessment (SSA) to the Research Governance Officer of the appropriate institution and have received a letter of authorisation from them.

Should you have any queries, please contact the Research Support Office on (02) 9382 3587. The HREC Terms of Reference, Standard Operating Procedures, membership and standard forms are available from the Research Support Office website:
http://www.seslhd.health.nsw.gov.au/POWH/researchsupport/default.asp.

Please quote **HREC ref no: 14/005** in all correspondence.

We wish you every success in your research.

Yours sincerely

Production Note:
Signature removed prior to publication.

Deborah Adrian
Executive Officer, Human Research Ethics Committee

This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research (2007)*, NHMRC and Universities Australia *Australian Code for the Responsible Conduct of Research (2007)* and the *CPMP/ICH Note for Guidance on Good Clinical Practice*.

CC: Dr Joanne Travaglia

Health
South Eastern Sydney
Local Health District

RESEARCH SUPPORT OFFICE

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17 February 2014

Ms Patricia Bradd
Allied Health Directorate
South Eastern Sydney Local Health District
Locked Mail Bag 21
Taren Point NSW 2229

Dear Ms Bradd

SSA ref no: 14/G/030
HREC ref no: 14/005 (LNR/14/POWH/005)
Project title: Testing the effectiveness of a Practice Development intervention as an enabler of allied health leadership development: A platform for enhancing the quality and safety of allied health practice

I refer to your Site Specific Assessment application for the above titled Low/Negligible Risk research project. I am pleased to advise that on 17 February 2014 by the delegated authority of the Chief Executive, I granted authorisation for the above project to commence at the South Eastern Sydney Local Health District.

The following conditions apply to this research project. These are additional to any conditions imposed by the Human Research Ethics Committee that granted ethical approval:

1. Proposed amendments to the research protocol or conduct of the research which may affect the ethical acceptability of the project, and are submitted to the lead HREC for review, are copied to the Research Governance Officer.
2. Proposed amendments to the research protocol or conduct of the research which may affect the ongoing site acceptability of the project are to be submitted to the Research Governance Officer.

If you have any queries relating to the above please contact the Research Support Office on 9382 3587.

Yours sincerely

Production Note:
Signature removed prior to publication.

Robert Smallcombe
Research Governance Officer

Prince of Wales Hospital
Community Health Services
Barker Street
Randwick NSW 2031

APPENDIX 7: Allied Health Leadership Development Program – Qualitative Data

Combined Baseline Data: 2014–2015 cohort and 2015–2016 cohort

This section provides details in relation to the combined results from across all study participants in relation to study demographics. A summary of these results is also found in Chapter 7.

Except where indicated, data is generally presented across three years:

- 2014 – Depicting combined Cohort 1 (Control and Intervention Group) baseline data
- 2015 – Depicting repeat data collection for combined Cohort 1 (Control and Intervention Group) data
- 2016 – Depicting repeat data collection for Cohort 2 (unmatched Intervention Group). Note – baseline data for this group comprises a combination of data from 2015 control group participants and data from new 2015 participants.

Gender

In the 2014 and 2015 cohorts, approximately 94 per cent of participants were female. This is higher than the national average for a number of registered health professions (Australian Institute of Health and Welfare, 2013) and in comparison to a study undertaken in Victoria where the percentage of females in a 2013 workforce study was approximately 85 per cent (Department of Health, 2013). The 2016 cohort was closer to the national average at 88 per cent.

In the 2014–2015 cohort, one male was randomised to the control group and one to the intervention group.

Gender 2014

	Response Percent	**Response Count**
Male	6.1%	2
Female	93.9%	31

Gender 2015

	Response Percent	**Response Count**
Male	6.7%	2
Female	93.3%	28

Gender 2016

	Response Percent	**Response Count**
Male	11.7%	2
Female	88.3%	15

Age (years):

Results illustrate that the 2014 cohort were aged between 20 and 49 years of age. There were no participants over 50 years. With the new participants in the 2015 cohort, a similar spread across aged groups were found, with the exception that there were two participants aged between 50-60 years.

Age 2014

	Response Percent	**Response Count**
20-29 years	30.3%	10
30-39 years	30.3%	10
40-49 years	39.4%	13
50-60 years	0.0%	0
60 years or over	0.0%	0

Age 2015 (new participants)

	Response Percent	Response Count
20-29 years	23.1%	3
30-39 years	38.5%	5
40-49 years	23.1%	3
50-60 years	15.4%	2

Place of Work

There was a spread of participants from across seven service areas in SESLHD. As expected, most participants were from the large tertiary hospitals (St George Hospital and Prince of Wales Hospital).

Place of Work 2014

	Response Percent	Response Count
Sutherland Hospital	12.1%	4
St George Hospital	36.4%	12
Calvary Healthcare	12.1%	4
Prince of Wales Hospital	36.4%	12
Sydney/Sydney Eye Hospital	6.1%	2
War Memorial Hospital	9.1%	3
Albion Street Centre	3.0%	1

Place of Work 2015

	Response Percent	Response Count
Sutherland Hospital	13.3%	4
St George Hospital	20%	6
Calvary Healthcare	13.3%	4
Prince of Wales Hospital	36.7%	11
Sydney/Sydney Eye Hospital	6.7%	2
War Memorial Hospital	6.7%	2
Albion Street Centre	3.3%	1
Mental Health services		0

Place of Work 2016

	Response Percent	Response Count
Sutherland Hospital	11.8%	2
St George Hospital	17.6%	3
Calvary Healthcare	5.9%	1
Prince of Wales Hospital	58.8%	10
Sydney/Sydney Eye Hospital	0.0%	0
War Memorial Hospital	5.9%	1
Albion Street Centre	0.0%	0
Mental Health services	0.0%	0
Drug and Alcohol Services	0.0%	0

Professional Discipline

There were nine allied health professional disciplines represented in the study cohort. In the SESLHD context, all major allied health groups were represented. Occupational therapy had the largest number of participants, followed by physiotherapy and social work. Orthoptics and psychology had the smallest number.

Professional Discipline 2014

	Response Percent	**Response Count**
Nutrition and dietetics	9.1%	3
Occupational therapy	30.3%	10
Orthoptics	3.0%	1
Pharmacy	6.1%	2
Physiotherapy	15.2%	5
Podiatry	6.1%	2
Psychology	3.0%	1
Social work	15.2%	5
Speech pathology	12.1%	4

Professional Discipline 2015

	Response Percent	**Response Count**
Nutrition and dietetics	10%	3
Occupational therapy	26.7%	8
Orthoptics	3.3%	1
Pharmacy	6.7%	2
Physiotherapy	16.7%	5
Podiatry	6.7%	2

Psychology	3.3%	1
Social work	16.7%	5
Speech pathology	10%	3

Professional Discipline 2016

	Response Percent	**Response Count**
Nutrition and dietetics	17.6%	3
Occupational therapy	29.4%	5
Orthoptics	5.9%	1
Pharmacy	0.0%	0
Physiotherapy	23.5%	4
Podiatry	0.0%	0
Psychology	0.0%	0
Social work	11.8%	2
Speech pathology	11.8%	2

Employment status

The majority of study participants across all years (range 85%-94%) were fulltime employees of SESLHD.

Employment status 2014

	Response Percent	**Response Count**
Fulltime	84.8%	28
Part time	15.2%	5

Employment status 2015

	Response Percent	Response Count
Fulltime	90%	27
Part time	10%	3

Employment status 2016

	Response Percent	Response Count
Fulltime	94.1%	16
Part time	5.9%	1

Professional Grading

Across both cohorts, the majority of study participants were in a senior position at commencement of the program. There were four level 2 graded allied health professionals at the commencement of the 2014 program and two at the commencement of the 2015 program. These roles traditionally do not supervise other allied health professionals, although may supervise allied health assistants and are expected to supervise student clinicians.

Professional Grading 2014

	Response Percent	Response Count
Health Professional Level 1/2	12.1%	4
Health Professional Level 3	33.3%	11
Health Professional Level 4	39.4%	13

Health Professional Level 5	0.0%	0
Health Professional Level 6	6.1%	2
Health Professional Level 7	0.0%	0
Health Professional Level 8	3.0%	1
Senior Pharmacist	3.0%	1
Senior Clinical Psychologist	3.0%	1

Professional Grading 2015

	Response Percent	**Response Count**
Health Professional Level 1/2	6.7%	2
Health Professional Level 3	23.4%	7
Health Professional Level 4	46.7%	14
Health Professional Level 5	3.3%	1
Health Professional Level 6	3.3%	1
Health Professional Level 7	0%	0
Health Professional Level 8	6.7%	2
Senior Pharmacist	3.3%	1
Senior Clinical Psychologist	3.3%	1
Other (please specify)	3.3%	1

Other: Level 3 and level 8

Professional Grading 2016

	Response Percent	Response Count
Health Professional Level 1/2	5.9%	1
Health Professional Level 3	23.5%	4
Health Professional Level 4	58.8%	10
Health Professional Level 5	5.9%	1
Health Professional Level 6	0.0%	0
Health Professional Level 7	0.0%	0
Health Professional Level 8	0.0%	0
Senior Pharmacist	0.0%	0
Senior Clinical Psychologist	0.0%	0
Other (please specify)	5.9%	1

Other: Acting Level 4, usually Level 3

Number of staff supervised

Over 90 per cent of participants supervised other personnel across both study cohorts, with 67 per cent supervising three or more staff. Approximately 18 per cent of participants supervised more than 15 staff.

Number of staff supervised 2014

Answer Options	Response Percent	Response Count
None	9.1%	3
1-2	24.2%	8

3-5	30.3%	10
6-9	15.2%	5
10-15	3.0%	1
Greater than 15	18.2%	6

Number of staff supervised 2015

	Response Percent	**Response Count**
None	3.3%	1
1-2	20%	6
3-5	23.3%	7
6-9	30%	9
10-15	6.7%	2
Greater than 15	16.7%	5

Number of staff supervised 2016

	Response Percent	**Response Count**
None	17.6%	3
1-2	35.3%	6
3-5	11.8%	2
6-9	17.6%	3
10-15	11.8%	2
Greater than 15	5.9%	1

Length of time working in the NSW Health system

In the 2014 group, the majority of participants had worked in the public health system for five years or more (72%). One participant had worked for the public health system for less than 12 months (3%). Findings were similar for the 2015 cohort, with the exception that there were no participants who had worked in the public health system for less than 12 months.

Length of time working in the NSW Health system 2014

	Response Percent	**Response Count**
Less than 12 months	3.0%	1
1-5 years	24.2%	8
6-10 years	30.3%	10
11-20 years	30.3%	10
21-30 years	12.1%	4
More than 30 years	0.0%	0

Length of time working in the NSW Health system 2015

	Response Percent	**Response Count**
Less than 12 months	0.0%	0
1-5 years	23.3%	7
6-10 years	26.7%	8
11-20 years	36.7%	11
21-30 years	13.3%	4
More than 30 years	0.0%	0

Length of time working in the NSW Health system 2016

	Response Percent	Response Count
Less than 12 months	0.0%	0
1-5 years	0.0%	0
6-10 years	47.1%	8
11-20 years	41.2%	7
21-30 years	11.8%	2
More than 30 years	0.0%	0

Length of time in current role

In the 2014 cohort, just over half of the participants had worked in their present role from between one and five years. Almost a quarter of participants (24%) had worked in their role for five to 19 years. Two participants (6%) had worked for greater than 20 years in their current role.

In the 2015 cohort, similar results were found with just over half of the participants having worked in their present role from between one and five years. Approximately 20 per cent of participants had worked in their role for five to 19 years or for less than 12 months. One participant (3%) had worked for greater than 20 years in their current role.

Length of time in current role 2014

	Response Percent	Response Count
Less than 12 months	15.2%	5
1-5 years	54.5%	18
6-10 years	12.1%	4
11-20 years	12.1%	4
21-30 years	6.1%	2
More than 30 years	0.0%	0

Length of time in current role 2015

	Response Percent	Response Count
Less than 12 months	20%	6
1-5 years	56.7%	17
6-10 years	6.7%	2
11-20 years	13.3%	4
21-30 years	3.3%	1
More than 30 years	0.0%	0

Length of time in current role 2016

	Response Percent	Response Count
Less than 12 months	5.9%	1
1-5 years	58.8%	10
6-10 years	17.6%	3
11-20 years	17.6%	3
21-30 years	0.0%	0
More than 30 years	0.0%	0

Year of graduation

The list below detailed the year that each participant graduated with their first health related degree, taken at baseline. This suggests a spread of experience across program participants. Note – this question was not repeated in the 2016 survey.

Year of Graduation 2014

26 years	1988 (n=1)	13 years	2001 (n=2)
23 years	1991 (n=2)	11 years	2003 (n=3)
22 years	1992 (n=1)	10 years	2004 (n=1)
21 years	1993 (n=3)	9 years	2005 (n=2)
20 years	1994 (n=1)	8 years	2006 (n=2)
18 years	1996 (n=1)	7 years	2007 (n=5)
17 years	1997 (n=1)	6 years	2008 (n=3)
16 years	1998 (n=4)	4 years	2010 (n=1)

New participants (n=13) 2015

33 years	1982 (n=1)	12 years	2003 (n=1)
27 years	1988 (n=1)	11 years	2004 (n=1)
21 years	1994 (n=1)	10 years	2006 (n=2)
17 years	1998 (n=1)	9 years	2007 (n=1)
15 years	2000 (n=1)	8 years	2008 (n=1)
14 years	2001 (n=1)	5 years	2010 (n=1)

Leadership courses attended in the past 5 years

Feedback from 2014 participants indicated that, in the past five years:

- Three had attended the Effective Leadership/Clinical Leadership Course conducted in SESLHD
- Three had undertaken health coaching training
- Three had undertaken training in clinical supervision

There were a range of other miscellaneous courses noted by participants (n=12). Twelve of the participants had attended any leadership courses in the past five years.

Repeat feedback from the 2014–2015 cohort participants (n=30) indicated that, in the past year:

- Ten has not attended any further leadership training
- Sixteen had undertaken the Allied Health Leadership Program
- Four had attended other training (Implementation methodology; clinical supervision etc.)

The new participants who joined the program in 2015 (n=13) had, in the past five years attended:

- The SESLHD Clinical Leadership Program (1 person)
- In-house coaching and facilitation training (2 people)
- Clinical supervision (1 person)

Eight of the 15 new people had not attended any formal leadership training in the past five years.

Patient care time

Two of the participants were in fulltime management roles and did not provide any direct patient care. This mean that 94 per cent of participants undertook some direct patient care as part of their role.

Patient care time 2014

	Response Percent	Response Count
None (fulltime management)	6.1%	2
Up to 25%	9.1%	3
26-50%	15.2%	5
52-75%	21.2%	7
76-90%	42.4%	14
90-100%	6.1%	2

Patient care time 2015

	Response Percent	Response Count
None (fulltime management)	3.3%	1
Up to 25%	6.7%	2
26-50%	20%	6
52-75%	56.7%	17
76-90%	13.3%	4
90-100%	0.0%	0

Patient Care Time 2016

	Response Percent	Response Count
None (fulltime management)	0.0%	0
Up to 25%	5.9%	1
26-50%	0.0%	0
52-75%	52.9%	9
76-90%	29.4%	5
90-100%	11.8%	2

APPENDIX 8: Journal Publications

Article 1:

> 'Allied health leadership in New South Wales: a study of perceptions and priorities of allied health leaders' (March 2017), *Australian Health Review*; https://doi.org/10.1071/AH16135

Article 2:

> 'Leadership in Allied Health - A Review of the Literature' (May 2017), *Asia Pacific Journal of Health Management;* 12(1), 17-24

Article 3:

> 'Practice development and allied health – a review of the literature' (November 2017), *International Practice Development Journal*; 7(2)[7], 1-25; https://doi.org/10.19043/ipdj.72.007

CSIRO PUBLISHING
Australian Health Review
http://dx.doi.org/10.1071/AH16135

Allied health leadership in New South Wales: a study of perceptions and priorities of allied health leaders

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Abstract

Objective. The aim of the present study was to investigate the opinions and perceptions of senior allied health (AH) leaders in relation to AH leadership, governance and organisation from an Australian public health perspective. The target group was the New South Wales (NSW) Health AH directors or advisors, the most senior public AH professionals in NSW.

Methods. The study was conducted over a 6-month period in 2014–15 and comprised two parts: (1) data collection through a 46-question online survey that sought the views of AH leaders about the field of AH in NSW; and (2) two confirmatory focus groups with members of the NSW Health Allied Health Directors Committee.

Results. The online questionnaire generated novel information about the field of AH in the public sector of NSW, including the current organisation, governance and culture of AH. Focus group participants explored key findings in greater depth, including the effects of AH on and value of AH to the health system as a whole, as well as the attributes and competencies required by AH leaders. Participants identified the need to build and grow their influence, to more clearly demonstrate AH's contribution and to realign efforts towards more strategic issues influencing governance, performance, professional standards and advocacy. This entailed broadening the vision and scope of AH Directors as well as across discipline leaders.

Conclusion. The results provide new information about Australian AH leadership, governance, culture and organisation, and highlight potential priorities for future leadership activities.

What is known about this topic? Although leadership is considered an essential element in the provision of high-quality health care, leadership across AH remains underexamined.
What does this paper add? There is a paucity of literature pertaining to AH leadership nationally and internationally. This paper describes the issues affecting AH leaders and leadership in NSW, as reported by senior AH leaders.
What are the implications for practitioners? This study identifies key elements related to AH leadership and governance. Health systems and services can use this information to implement strategies that enhance AH leadership capability.

Received 24 June 2016, accepted 17 February 2017, published online 30 March 2017

REVIEW ARTICLE

Leadership in Allied Health: A Review of the Literature

P Bradd, J Travaglia and A Hayen

Abstract

Background: It is well established that effective clinical leadership improves the quality of healthcare service provision and promotes leadership outcomes. [1,2] Leadership capacity and capability of allied health professionals is needed for successful clinical service provision, [3] but less is known about allied health leadership than about other clinical groups.

Aims: The literature review aimed to identify research about leadership and leadership development of allied health practitioners in healthcare settings.

Methods: A database review was undertaken using SCOPUS, CINAHL, Medline and Business Elite databases from December 2014-September 2015. Three leadership journals were also hand searched. A total of 1665 articles were identified. These were scanned and 129 articles were retrieved with 70 articles shortlisted for in-depth review.

Results: After application of inclusion and exclusion criteria, seven journal articles were included in the literature review. Review of the studies identified two areas of primary focus: leadership styles and outcomes and leadership development programs.

Conclusions: Findings showed that there are currently a limited number of robust published reports in relation to leadership and allied health practitioners.

Implications for Practice: Well-designed research studies to further evaluate leadership skills of allied health practitioners as well as to determine the effectiveness of leadership programs in developing transformational leaders are required.

Abbreviations: CASP – Clinical Appraisal Skills Program; NHMRC – National Health and Medical Research Council.

Key words: leadership; allied health; framework.

Bradd, P., Travaglia, J. & Hayen, A. 2017, 'Leadership in allied health: A review of the literature', *Asia Pacific Journal of Health Management*, 12(1):17-24.
View/Download from: Publisher's site

International Practice Development Journal

Online journal of FoNS in association with the IPDC (ISSN 2046-9292)

CRITICAL REVIEW OF LITERATURE

Practice development and allied health – a review of the literature

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Received for publication: 4th June 2017
Accepted for publication: 17th August 2017
Published: 15th November 2017
https://doi.org/10.19043/ipdj.72.007

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).

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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

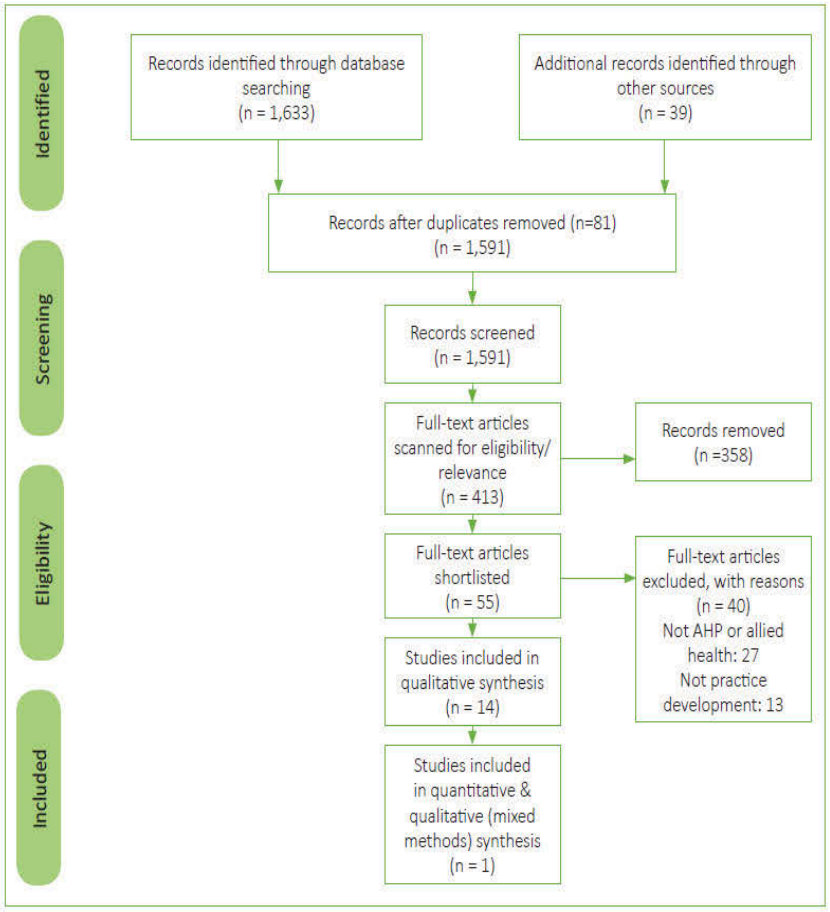
Search results

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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