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

Patricia Bradd

B.AppSc (Speech Path); GradCertMgmt; MHLthLeadMgmt

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.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature:  
Production Note:  
Signature removed prior to publication.

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 proofreading 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.
Chapter 1: Introduction ................................................................. 1
  1.1 Background ..................................................................................... 1
  1.2 Definition of allied health ................................................................. 2
  1.3 The Context for the Study ................................................................. 4
    1.3.1 The Organisational Context ......................................................... 4
    1.3.2 The political and policy context for clinician leadership .......... 5
    1.3.3 The policy context for leadership in NSW ................................. 6
  1.4 Allied health organisation in NSW and SESLHD ............................ 6
    1.4.1 Organisational structures .......................................................... 6
    1.4.2 Allied health industrial award classifications ............................. 8
  1.5 Rationale and aims for this study .................................................... 8
  1.6 Outline of the thesis ......................................................................... 9
  1.7 Outline of the Methodology .............................................................. 10
  1.8 Conclusion ...................................................................................... 11

Chapter 2: An overview of practice development and allied health .......... 12
  2.1 Introduction and definition of practice development ....................... 12
  2.2 Principles of practice development .................................................. 13
  2.3 Evolution of practice development .................................................. 20
    2.3.1 The origins of practice development ....................................... 20
    2.3.2 Contemporary practice development ....................................... 22
  2.4 Theoretical underpinnings of practice development ....................... 22
  2.5 Application of practice development .............................................. 22
    2.5.1 Application to nursing and midwifery in Australia ................. 22
    2.5.2 Practice development and allied health ................................. 23
  2.6 Literature review: Practice development and allied health professions 23
    2.6.1 Data sources and search strategy ............................................ 24
    2.6.2 Search process ....................................................................... 25
    2.6.3 Study selection (inclusion and exclusion criteria) .................. 27
4.4 The current status of allied health leadership – the NSW allied health leadership study

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4.1 Methods</td>
<td>73</td>
</tr>
<tr>
<td>4.4.2 Ethics</td>
<td>75</td>
</tr>
<tr>
<td>4.4.3 Results</td>
<td>75</td>
</tr>
<tr>
<td>4.4.4 Allied health leader self-assessment</td>
<td>78</td>
</tr>
<tr>
<td>4.4.5 Functions and competencies of Allied Health Directors/Advisors</td>
<td>78</td>
</tr>
<tr>
<td>4.4.6 Personal and professional strengths and opportunities</td>
<td>79</td>
</tr>
<tr>
<td>4.4.7 Leadership and influence</td>
<td>81</td>
</tr>
<tr>
<td>4.4.8 Allied health culture</td>
<td>82</td>
</tr>
<tr>
<td>4.4.9 Allied health attitudes and identity</td>
<td>82</td>
</tr>
</tbody>
</table>

4.5 Discussion: ................................................................................................. 83

4.6 Conclusion: NSW allied health leadership study ........................................ 86

4.7 Conclusion ........................................................................................................ 86

Chapter 5: The theoretical underpinnings of the allied health leadership development framework ................................................................................................................. 87

5.1 Introduction........................................................................................................ 87

5.2 The Theory of Transformational Leadership ...................................................... 87

5.2.1 Full range leadership theory ....................................................................... 87

5.2.2 Exemplary leadership theory ...................................................................... 89

5.3 Practice development theory ........................................................................... 91

5.3.1 Critical social theory: enlightenment, empowerment and emancipation ....... 91

5.3.2 Other theoretical perspectives on practice development ............................ 93

5.4 Theories underpinning the SESLHD Allied Health Leadership Development Program .......................................................................................................... 93

5.5 Allied health leadership research framework ................................................. 94

5.6 The SESLHD Allied Health Leadership Development Program ............................ 95

5.6.1 Program model ............................................................................................... 97

5.6.2 Sessions 1 and 2: Workshop days ............................................................... 98

5.6.3 Tools of practice development ..................................................................... 101

5.6.4 Creativity ..................................................................................................... 102

5.6.5 Evaluation of practice development ............................................................ 102

5.6.6 Sessions 3 to 8: Action Learning Sets (ALS) .............................................. 103

5.6.7 Coaching ...................................................................................................... 107

5.6.8 Undertaking facilitation: Completion of a workplace project ..................... 108

5.6 Conclusion .............................................................................................................. 110

Chapter 6: Methodology and methods.................................................................. 111

6.1 Introduction........................................................................................................ 111

6.2 Aims/Objectives ................................................................................................. 111

6.3 Research question ............................................................................................... 112
6.4 Scientific hypotheses .............................................................................................. 112
6.5 Research design ...................................................................................................... 113
6.6 Definitions of variables ........................................................................................... 115
   6.6.1 Independent variable .................................................................................... 115
   6.6.2 Dependent variables ..................................................................................... 115
   6.6.3 Descriptive variables .................................................................................... 115
6.7 Methods .................................................................................................................. 117
   6.7.1 Participants and setting ................................................................................ 117
   6.7.2 Target group ................................................................................................. 117
   6.7.3 Inclusion and exclusion criteria ................................................................... 117
   6.7.4 Sample 2014–2015 cohort ........................................................................... 118
   6.7.5 Sample Size 2014–2015 ............................................................................... 119
   6.7.6 Recruitment 2014–2015 ............................................................................... 120
   6.7.7 Intervention 2014–2015 ............................................................................... 121
6.8 Study protocol – Experimental Group (2014–2015) .............................................. 121
   6.8.1 Intervention Group A: Participants involved in the leadership program ..... 121
   6.8.2 Intervention Group B: Participants involved in the leadership program plus coaching. ........................................................... 121
   6.8.3 Summary of the Allied Health Leadership Development Program .......... 123
6.9 Study protocol: Control group ................................................................................ 124
   6.9.1 Control Group: Usual practice/no additional intervention .......................... 124
6.11 Instrumentation ..................................................................................................... 126
   6.11.1 Baseline measures instruments: 2014–2015 group .................................... 126
   6.11.2 Baseline measures: 2015–2016 group ....................................................... 131
6.12 Statistical methods ................................................................................................ 131
6.13 Measures of quality improvement ........................................................................ 134
6.14 Ethics .................................................................................................................... 135
   6.14.1 Consent and information to participants .................................................... 135
   6.14.2 Risks to participants ................................................................................... 135
   6.14.3 Confidentiality ........................................................................................... 135
6.15 Implementation plan ............................................................................................. 136
6.16 Conclusion ............................................................................................................ 137

Chapter 7: Results of the SESLHD Allied Health Leadership Development Program .................................................................................................................................. 138
7.1 Introduction ............................................................................................................. 138
7.2 Collection of baseline data ...................................................................................... 138
    7.2.1 Collection of baseline data: 2014–2015 cohort ......................................... 139
    7.2.2 Collection of baseline data: 2015–2016 cohort ......................................... 139
7.3 Demographics: Characteristics of study participants .............................................. 140
    7.3.1 Characteristics of allied health participants: 2014–2015 program .......... 140
7.3.2 Characteristics of allied health participants: 2015–2016 program .......... 142
7.3.3 Combined baseline data: 2014–2015 and 2015–2016 cohorts .................. 143
7.3.4 Leadership courses attended in the past five years ...................... 146
7.4 Qualitative results .............................................................................. 146
7.5 Qualitative evaluation of the leadership program .......................................................... 147
7.5.1 Qualitative evaluation of the leadership program: 2014–2015 cohort.................. (Intervention Group) ...................................................... 147
7.5.2 Qualitative evaluation of the leadership program: 2015–2016 cohort .......... 149
7.6. Participants’ person-centred quality project .................................. 151
7.7 Qualitative evaluation of coaching ................................................. 153
7.8 Review of quality and safety outcomes ............................................ 154
7.9 Organisational outcomes ................................................................. 155
7.9.1 Organisational impact ................................................................. 155
7.9.2 Career outcomes ........................................................................ 156
7.9.3 Cost of the program ..................................................................... 156
7.9.4 Manager satisfaction ................................................................. 156
7.10 Summary: Qualitative results .......................................................... 157
7.11 Quantitative results ........................................................................... 157
7.12 Quantitative data from the 2014–2015 cohort (Cohort 1) .................... 158
7.12.1 Workplace culture ................................................................. 163
7.12.2 Workplace engagement .......................................................... 164
7.12.3 Leadership ............................................................................. 165
7.12.4 Workshop and Action Learning Set outcomes ............................... 166
7.12.5 Intervention group: Coaching versus no coaching .................... 167
7.13 Quantitative data from the 2015–2016 cohort (Cohort 2) .................... 168
7.13.1 Workplace culture ................................................................. 171
7.13.2 Workplace engagement .......................................................... 171
7.13.3 Leadership ............................................................................. 171
7.13.4 Workshop and Action Learning Set outcomes ............................... 173
7.14 Summary: Quantitative results .......................................................... 174
7.15 Integration of study findings ............................................................. 175
7.15.1 Aims of the study and research question .................................. 175
7.16 Scientific hypotheses ........................................................................... 176
7.17 Conclusion .......................................................................................... 179

Chapter 8: Discussion ................................................................................. 181
8.1 Introduction......................................................................................... 181
8.2 Allied health leaders and leadership .................................................. 181
8.2.1 Allied health culture ................................................................. 182
8.2.2 Leadership in allied health ......................................................... 185
8.2.3 Allied health attitudes ................................................................. 185
8.3 Practice development and allied health ............................................. 186
8.4 Allied Health Leadership Development ................................................................. 187
  8.4.1 Findings from the study ............................................................................... 188
8.5 Overall program evaluation .................................................................................. 195
  8.5.1 Health LEADS Framework and Kirkpatrick’s Model of Evaluation .......... 195
  8.5.2 Developing person-centred care through practice development............. 199
  8.5.3 Allied health quality improvement ............................................................ 199
8.6 Strengths and limitations .................................................................................... 200
8.7 Conclusion ......................................................................................................... 202

Chapter 9: Conclusion ............................................................................................... 203
  9.1 Introduction ...................................................................................................... 203
  9.2 Recommendations .......................................................................................... 204
  9.3 Conclusion ...................................................................................................... 207

Chapter 10: References ............................................................................................. 311
List of Figures

Figure 1.1 Reporting structure for allied health services in SESLHD .......................... 7
Figure 2.1 Prisma summary of search results – practice development and allied health ...28
Figure 2.2 Literature review framework ...................................................................... 29
Figure 3.1 Prisma summary of search results – allied health leadership ..................... 58
Figure 5.1 Allied health leadership research framework .............................................. 96
Figure 5.2 Program model ......................................................................................... 99
Figure 6.1 2014–2015 cohort: Intervention/Control group design .............................. 113
Figure 6.2 2015–2016 cohort: Intervention group design ........................................... 114
Figure 6.3 Randomisation process for the 2014–2015 cohort ...................................... 119
Figure 6.4 Schematic illustration of research methodology (Cohort 1) 2014–2015 ..... 122
Figure 6.5 Schematic illustration of research methodology (Cohort 2) 2015-2016 ....... 125
Figure 6.6 Mixed methods design typology ............................................................... 133
Figure 6.7 Phases of the study .................................................................................. 137
Figure 7.1 Schema of the data collection process ...................................................... 138
Figure 8.1 Schema: Allied health cultural framework ............................................... 183
Figure 8.2 Schema: Allied health ways of working .................................................... 183
Figure 8.3 Schema of the SESLHD Allied Health Leadership Development Program ... 187
List of Tables

Table 2.1 Numbers of identified references .................................................................26
Table 2.2 Total selected articles ..................................................................................26
Table 2.3 Practice setting for each of the studies .........................................................32
Table 3.1 Database search by term .............................................................................55
Table 3.2 Journal search by term ...............................................................................56
Table 3.3 Totals selected for full article review .........................................................57
Table 3.4 Characteristics of included studies ..............................................................59
Table 3.5 Characteristics of included studies: quantitative .........................................60
Table 3.6 Characteristics of included studies: qualitative ..........................................61
Table 4.1 Allied health IIMS reported incidents January 2011–December 2012 ..........69
Table 4.2 Allied health IIMS reported incidents January 2015–December 2016 ..........69
Table 5.1 Number of attendees .................................................................................105
Table 6.1 Survey 1 questions: Workplace culture ......................................................128
Table 7.1 Summary: Characteristics of 2014–2015 allied health participants per group ..141
Table 7.2 Summary: Characteristics of 2015–2016 allied health participants ............142
Table 7.3 Demographics of study participants .........................................................144
Table 7.4 List of allied health projects ......................................................................152
Table 7.5 Quality and safety outcomes ..................................................................154
Table 7.6 Self-rating: Summary of across-group comparison control and intervention group’s statistical data ......................................................................................159
Table 7.7 Other raters MLQ: Summary of across-group comparison control and intervention group’s statistical data .........................................................160
Table 7.8 Self-rating: Summary of within-group comparison statistical data ..........161
Table 7.9 Other raters MLQ: Summary of within-group comparison statistical data .............................................162
Table 7.10 Workshop outcomes: 2014–2015 cohort ..................................................................................166
Table 7.11 Intervention group self-report of levels of confidence: ALS, 2014–2015 cohort ..................................................................................................................167
Table 7.12 2014–2015 Intervention group: Self rating – coaching versus no coaching ...169
Table 7.13 2014–2015 Intervention group: Other rater – Coaching versus no coaching..170
Table 7.14 Results from the 2015–2016 cohort .........................................................................................172
Table 7.15 Workshop Outcomes: 2015–2016 cohort ..............................................................................173
Table 7.17 Summary of results of randomised control trial for the 2014–2015 Cohort....179
Table 8.1 Health LEADS Framework and the Kirkpatrick Model of Evaluation .................197
List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>Appreciative Inquiry</td>
</tr>
<tr>
<td>ALS</td>
<td>Action Learning Set</td>
</tr>
<tr>
<td>CASP</td>
<td>Clinical Appraisals Skills Programme</td>
</tr>
<tr>
<td>CEC</td>
<td>Clinical Excellence Commission</td>
</tr>
<tr>
<td>CINAHL</td>
<td>Cumulative Index to Nursing and Allied Health Literature</td>
</tr>
<tr>
<td>CLP</td>
<td>Clinical Leadership Program</td>
</tr>
<tr>
<td>CLI</td>
<td>Clinical Leadership Inventory</td>
</tr>
<tr>
<td>DAH</td>
<td>Director(s) of Allied Health</td>
</tr>
<tr>
<td>FoNS</td>
<td>Foundation of Nursing Studies</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-time equivalent</td>
</tr>
<tr>
<td>HETI</td>
<td>Health Education and Training Institute</td>
</tr>
<tr>
<td>IIMS</td>
<td>NSW Incident Information Management System</td>
</tr>
<tr>
<td>IPDJ</td>
<td>International Practice Development Journal</td>
</tr>
<tr>
<td>LBQ</td>
<td>Leadership Behaviour Questionnaire</td>
</tr>
<tr>
<td>LEAHP Program</td>
<td>Leadership Excellence for Allied Health Professionals Program</td>
</tr>
<tr>
<td>LHD</td>
<td>Local Health District</td>
</tr>
<tr>
<td>LPI</td>
<td>Leadership Practices Inventory</td>
</tr>
<tr>
<td>MLQ</td>
<td>Multifactor Leadership Questionnaire</td>
</tr>
<tr>
<td>NDU</td>
<td>Nursing Development Unit</td>
</tr>
<tr>
<td>NHHRC</td>
<td>National Health and Hospitals Reform Commission</td>
</tr>
<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>ORBIT</td>
<td>Online Reporting Business Intelligence Tool</td>
</tr>
<tr>
<td>OT</td>
<td>Occupational therapy</td>
</tr>
<tr>
<td>PAR</td>
<td>Participatory Action Research</td>
</tr>
<tr>
<td>PDU</td>
<td>Practice Development Unit</td>
</tr>
<tr>
<td>POWH</td>
<td>Prince of Wales Hospital</td>
</tr>
<tr>
<td>PRAXIS</td>
<td>Purpose, Reflexivity, Approaches, ConteXt, Intent, Stakeholders</td>
</tr>
<tr>
<td>PUGQ</td>
<td>Positive, Unconditional Generative Question</td>
</tr>
<tr>
<td>SESLHD</td>
<td>South Eastern Sydney Local Health District</td>
</tr>
<tr>
<td>SGH</td>
<td>St George Hospital</td>
</tr>
<tr>
<td>SN</td>
<td>Speciality Network</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>SSEH</td>
<td>Sydney/Sydney Eye Hospital</td>
</tr>
<tr>
<td>TSH</td>
<td>The Sutherland Hospital</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UWES</td>
<td>Utrecht Workplace Engagement Scale</td>
</tr>
</tbody>
</table>
## List of Appendices

**APPENDIX 1:** Practice development and allied health Critical Analysis Matrix .......................... 209

**APPENDIX 2:** Participant Information and Consent Form .............................................. 213

**APPENDIX 3:** Mind Garden™ Authorisation to use the Multifactor Leadership Questionnaire (Avolio and Bass) ........................................................................................................... 220

**APPENDIX 4:** South Eastern Sydney Local Health District Allied Health Leadership Development Program Evaluation Forms ................................................................. 221

**APPENDIX 5:** Description of the South Eastern Sydney Local Health District Leadership Program, including theoretical underpinnings ................................................................. 234

**APPENDIX 6:** Low Negligible Risk and Site-Specific Approval Ethics Approval South Eastern Sydney Local Health District 2014 .................................................................................. 253

**APPENDIX 7:** Allied Health Leadership Development Program – Qualitative Data ........................ 256

**APPENDIX 8:** Journal Publications ......................................................................................... 273
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


‘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.


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


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.


*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.

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.