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**Effectiveness of interventions for the development of leadership skills  
among nurses: a systematic review protocol**

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## Effectiveness of interventions for the development of leadership skills among nurses: a systematic review protocol

### Abstract

Review question/objective: What interventions are the most effective for the development of leadership skills for nurses? The review objective is to systematically review the evidence to identify the effectiveness of interventions for the development of leadership skills among nurses. Center conducting the review: Centre for Evidence-based Initiatives in Health Care - University of Wollongong: an Affiliate Center of the Joanna Briggs Institute.

### Publication Details

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## Review title

Effectiveness of interventions for the development of leadership skills among nurses: a systematic review protocol

## Reviewers

Primary reviewer: Michael Darragh<sup>1</sup>  
Secondary reviewer: Victoria Traynor<sup>1</sup>  
Secondary reviewer: Joanne Joyce-McCoach<sup>1</sup>

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## Center conducting the review

Centre for Evidence Based Initiatives in Health Care – University of Wollongong: An affiliate center of the Joanna Briggs Institute

## Review question/objective

Review question: What interventions are most effective for the development of leadership skills for nurses?

The review objective is: to systematically review the evidence to identify the effectiveness of interventions for the development of leadership skills among nurses.

## Background

Leadership as used in the literature is an ambiguous term and may cover a range of ideas and people in various roles. From a synthesis of the literature it is recognised that leadership is an abstract concept which requires a context to give it more specific meaning, therefore for the purpose of this review, it is defined by this author within an organisational context, as: the influence of others by inspiration, encouragement and direction, to willingly follow in the pursuit of objectives.

From an initial search of CINAHL and Medline online databases over nine thousand (9,000) articles were retrieved on the topic of nursing leadership, highlighting its importance and challenges, with a number focusing on the development of leadership skills. A common proposition within this body of literature is that the role of leadership is to inspire, encourage and influence others in a manner that keeps them committed to the goals and values of the organisation.<sup>1</sup>

Leadership in health care is seen to be important for high quality care outcomes.<sup>2</sup> In a qualitative study across 200 nursing homes, Pearson<sup>3</sup> identified the importance of leadership by senior nurses (referring to Directors of Nursing and Charge Nurses) on the outcome of quality care and life for care recipients. The senior nurse's leadership role was identified as pivotal in impacting high quality care outcomes, and this proposition is supported over time by many authors, including Martin, et al<sup>2</sup>, and Hewison<sup>4</sup>, who call for improvement in the preparation of nurses for leadership roles. The evidence also reflects that nursing leadership is an international concern, as recently identified by the International Council of Nurses in their Vision Statement for Nursing in the 21<sup>st</sup> Century,<sup>5</sup> requiring that nurses are equipped with the knowledge, strategies and strength to lead health services and populations through change for healthier futures. In terms of health workforce leadership, Gilmartin and D'Aunno<sup>6</sup> identified that "leadership is positively and significantly associated with individual and group satisfaction, retention and performance", (Page 394). Significantly, in the majority of these studies, authors agree that nursing leadership is seen to operate in complex, challenging and dynamically changing situations, affirming the

need for effective leadership skills to meet these challenges.<sup>7</sup> Nursing leadership is challenging, requiring a broad suite of capabilities and competences from the leader. Omoike, et al,<sup>8</sup> claim that the capabilities and competences of nurse leaders enables and empowers nurses to operationalise leadership across a range of diverse health settings, where nurse leaders make the most effective use of all available resources to achieve positive outcomes for their patients and the organisation where they work. This mirrors the findings of Martin, et al,<sup>9</sup> in a Swiss hospital based study of clinical leadership competency among nurses, specifically seeking to measure leadership competency development. Whilst the nursing work environment is increasingly complex, with pressures from consumer expectations, advances in technology, pharmacology, and medical sciences, along with changing service models and diminishing resources the complexity of the work environment calls for diverse leadership skills.<sup>10</sup>

A paradigm for nursing leadership posed by Porter-O'Grady<sup>10</sup> identified the need for relational leadership, and the importance of emotional intelligence for the new age leader. In this paradigm, effectiveness elements of self-awareness, self-management, social awareness, and relationship management were viewed as critical. "The leader is always dealing with people within the vortex and complexity of change movement. Even responding to critical events at the right time is fraught with the ebbs and flows of the next emerging stage of change"(p. 110).<sup>10</sup> Supporting these findings, Cummings<sup>11</sup> undertook a systematic review of nursing leadership publications, which lead to the assertion that traditional task focused leadership was ineffective in achieving optimal outcomes, instead, what is needed is transformational and relational nursing leadership in order to achieve effective outcomes. This idea resonates with Porter-O'Grady's<sup>10</sup> leadership paradigm. This systematic review will specifically focus on interventions for leadership skill development of senior nurses.

A number of studies have identified specific focus areas for nursing leadership development. Day, et al,<sup>12</sup> reviewed 25 years of research publications in a publication called *The Leadership Quarterly* and found focus areas could be broadly categorized into, either, interpersonal or intrapersonal leadership phenomena. They also noted a distinction between leader development, classified as an individual growth process, and leadership development, which is an activity or process involving a group, cohort or multiple individuals collectively, especially in relation to skills. Roles of nursing leadership have evolved over the past three decades. In the 80's health services were led by Administrators, in the 90's, the Manager was the preferred role, now in the new millennium 'Leader' is the role embodied by senior nurses. The senior nurse's role, overtime this time, has grown from circumscribed clinical and managerial functions, to a broader, more strategic and relational focus.<sup>2</sup> Currently no previous systematic review has been undertaken specifically focusing on nursing leadership skill development interventions, so this systematic review will provide scope and analysis on this topic. More specifically, whilst a lot of literature reports leadership development for nurses from undergraduate and post graduate stages of career, this research is interested in identifying the effective interventions used among senior nurses, defined as directors of nursing, charge nurses, nurse executives and nurse administrators

Leadership development interventions are reported in a number of health care organisations, established in an effort to develop a platform of increased capacity, and to develop the skills they require for succession, growth and change. Based on studies with the US Army, Michael<sup>13</sup> posed the question whether leadership skills develop in relation to experience over time, and if so, what kinds of experiences are effective. The authors proposed a conceptual model for leadership skill development, comprising 4 inter-related domains of Personal Characteristics, Career Development, Training and Assignment, and Developmental Issues. The findings of this study demonstrated that leadership performance is frequently dependent on the leaders ability to solve complex, ill-defined or novel problems, which again supports the paradigm change to new age leadership posited by Porter-O'Grady.<sup>10</sup>

A number of recent publications highlight the growing trend in many countries towards systematic frameworks for nursing leadership development, signifying a trend towards a formal and structured approach for leadership development. Both Mortlock<sup>14</sup> and Kumar<sup>15</sup> report on the recent implementation of leadership development frameworks by the National Health Service (NHS) in the UK, a driving force in the development of leadership skills at all levels and among all disciplines within the health sector. The NHS approach to a Leadership Framework, recognises seven (7) domains of leadership, including five (5) core domains which involve collaborative contributions of: *demonstrating*

*personal qualities, working with others, managing services, improving services, and setting direction*; and, the remaining 2 domains which relate to individual roles of: *creating the vision*, and *delivering the strategy*. A strength of Kumar's<sup>15</sup> work is identification of barriers and pitfalls related to leadership development in the healthcare setting. An important point made is that, regardless of the leadership development approach, the individual characteristics of the leader are central, and adoption of a generic approach to leadership skill development presents a risk of failure.

Recent approaches taken in Australia mirror this NHS initiative, with the implementation by the NSW Health Education and Training Institute (HETI) of the NSW Health Leadership Framework.<sup>16</sup> This evidence-based framework also draws upon Canadian Health Service experience from their 'Leads in a Caring Environment' leadership capability framework.<sup>17</sup> For NSW health services, HETI has developed a nine (9) month leadership development program, called the 'Clinicians and Executives Team Leadership Program' (CETL), which is designed to build individual, team and organisational capability. Another innovative program currently underway is the Clinical Leadership in Aged Care (CLiAC) project which involves a structured intervention of education, mentoring and active learning exercises designed to develop leadership behaviours and skills among nurses in aged care settings.<sup>18</sup>

From this initial review of the literature there is substantial and ongoing interest in developing effective leadership in health care, however there is a gap in the literature surrounding the identification and measurement of effective interventions, and very few experimental studies which compare interventions for leadership skill development among senior nurses. The leadership skills of senior nurses are acknowledged as playing a major role in organisational leadership and the health outcomes of care recipients<sup>3, 11</sup>, therefore, this systematic review of the literature will benefit the health sector and service consumers through the identification and evaluation of evidence on effective interventions for leadership skill development of senior nurses. This new knowledge will enable better utilisation of resources and enhance program development through identification of the most effective interventions for leadership skill development for senior nurses.

## **Inclusion criteria**

### **Types of participants**

This review will consider studies that include nurses in, or preparing for, recognized operational leadership roles, including, but not limited to: Directors of Nursing, Nursing Unit Managers, Operational Managers, Directors, Administrators, Co-ordinators, Supervisors and similar equivalent positions of leadership by nurses.

### **Types of intervention(s)/phenomena of interest**

This review will consider studies that evaluate interventions, structured and non-structured, inclusive of all comparators, that aim to develop leadership skills among nurses.. Comparators may include no intervention. Non-structured interventions may include flexible programs which are not delineated by time, completion of specific components, or pre-conceived goals, for example, some Mentoring and coaching interventions may fall into this category.

### **Types of outcomes**

This review will consider studies that include measures of leadership skill development outcomes of nurses, including intervention effectiveness measured using validated tools or through numerically rated observation scales, for example the Multifactor Leadership Questionnaire, and inclusive of self-efficacy rating scales. Leadership skill development outcomes of primary interest include communication, delegation, conflict resolution, problem solving, planning and decision making.

### **Types of studies**

This review will consider both experimental and epidemiological study designs including randomized controlled trials, non-randomized controlled trials, quasi-experimental, before and after studies, prospective and retrospective cohort studies, case control studies and analytical cross sectional studies.

## Search strategy

The search strategy aims to find both published and unpublished studies. A three-step search strategy will be utilized in this review. An initial limited search of MEDLINE and CINAHL will be undertaken followed by analysis of the text words contained in the title and abstract, and of the index terms used to describe article. A second search using all identified keywords and index terms will then be undertaken across all included databases. Thirdly, the reference list of all identified reports and articles will be searched for additional studies. For reasons of comprehension, only studies published in English will be considered for inclusion in this review. All relevant studies published, without date limitation, will be considered for inclusion in this review.

The databases to be searched include:

CINAHL

MEDLINE

Scopus

COCHRANE CENTRAL REGISTER OF CONTROLLED TRIALS

Proquest Dissertation and Theses A&I

ERIC

PsycINFO

Initial keywords to be used will be:

Nurse, leader, leadership, skill, intervention, development, education, training, approach, strategy, program, module, course, framework, system, competence, capability, mentor, coach, model, curriculum, method, management, manager, professional.

## Assessment of methodological quality

Quantitative papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardized critical appraisal instruments from the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) (Appendix I). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

## Data collection

Quantitative data will be extracted from papers included in the review using the standardized data extraction tool from JBI-MAStARI (Appendix II). The data extracted will include specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

## Data synthesis

Quantitative papers will, where possible, be pooled in statistical meta-analysis using JBI-MAStARI. All results will be subject to double data entry. Effect sizes expressed as odds ratio (for categorical data)

and weighted mean differences (for continuous data) and their 95% confidence intervals will be calculated for analysis. Heterogeneity will be assessed statistically using the standard Chi-square and also explored using subgroup analyses based on the different quantitative study designs included in this review. Where statistical pooling is not possible the findings will be presented in narrative form including tables and figures to aid in data presentation where appropriate.

## Conflicts of interest

There are no conflicts of interest impacting primary or secondary reviewers.

## Acknowledgements

This systematic review is undertaken as part of studies towards the awarding of a Doctor of Philosophy degree.

## References

1. Porter-O'Grady, T. A different age for leadership, part 1: *J Nurs Adm.* **2003**, **33**, 105-110.
2. Martin, G. P.; Learmonth, M. A critical account of the rise and spread of 'leadership': The case of UK healthcare, *Soc Sci Med.* **2012**, **74**, 281-288.
3. Pearson, A.; Hocking, S.; Mott, S.; Riggs, A. Management and leadership in Australian nursing homes, *Nurs Pract.* **1992**, **5**, 24-28.
4. Hewison, A.; Morrell, K. Leadership development in the English National Health Service: A counter narrative to inform policy, *Int J Nurs Stud.* **2014**, **51**, 677-688.
5. Nurses, I. C. o. International Council of Nurses, 2013, LFC Vision, Mission & Key Strategic Aims See <http://www.icn.ch/pillarsprograms/lfc-vision-mission-and-key-strategic-aims/> for further details. Accessed 1 September 2014.
6. Gilmartin, M. J.; D'Annunzio, T. A. Leadership research in healthcare: a review and roadmap, *Annals.* **2007**, **1**, 387-438.
7. Macphee, M.; Skelton-Green, J.; Bouthillette, F.; Suryaprakash, N. An empowerment framework for nursing leadership development: supporting evidence, *J Adv Nurs.* **2012**, **68**, 159-169.
8. Omoike, O.; Stratton, K. M.; Brooks, B. A.; Ohlson, S.; Storjell, J. L. Advancing nursing leadership: a model for program implementation and measurement, *Nurs Adm Q.* **2011**, **35**, 323-332.
9. Martin, J. S.; Frei, I. A.; Suter-Hofmann, F.; Fierz, K.; Schubert, M.; Spirig, R. [Evaluation of nursing and leadership competencies - a baseline for practice development], *Pflege.* **2010**, **23**, 191-203.
10. Porter-O'Grady, T. A Different Age for Leadership, Part 2: New Rules, New Roles, *J Nurs Adm.* **2003**, **33**, 173-178.
11. Cummings, G. G. Nursing leadership and patient outcomes, *J Nurs Man.* **2013**, **21**, 707-708.
12. Day, D. V.; Fleenor, J. W.; Atwater, L. E.; Sturm, R. E.; McKee, R. A. Advances in leader and leadership development: A review of 25 years of research and theory, *Lead Q.* **2014**, **25**, 63-82.
13. Michael, D. M.; Stephyen, J. Z.; Francis, D. H.; Jacobs, T. O.; Edwin, A. F. Leadership skills for a changing world: Solving complex social problems, *Leadership Quarterly.* **2000**, **11**, 11-35.
14. Mortlock, S. A framework to develop leadership potential, *Nurs Man.* **2011**, **18**, 29-32.
15. Kumar, R. D. C. Leadership in healthcare, *Anaesth Intensive Care Med.* **2013**, **14**, 39-41.
16. Clarke, E.; Diers, D.; Kunisch, J., et al. Strengthening the nursing and midwifery unit manager role: an interim programme evaluation, *J Nurs Man.* **2012**, **20**, 120-129.
17. Comack, M. T. A journey of leadership: from bedside nurse to chief executive officer, *Nurs Adm Q.* **2012**, **36**, 29-34.
18. Jeon, Y. H. Innovation in aged care leadership: overcoming workforce and care quality issues?, *Aust Nurs Mid J.* **2014**, **21**, 37.



## Appendix I: Appraisal instruments - MASTARI Appraisal instrument

### JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial

Reviewer ..... Date .....

Author ..... Year ..... Record Number .....

	Yes	No	Unclear	Not Applicable
1. Was the assignment to treatment groups truly random?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were participants blinded to treatment allocation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was allocation to treatment groups concealed from the allocator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were those assessing outcomes blind to the treatment allocation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Were the control and treatment groups comparable at entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were groups treated identically other than for the named interventions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in the same way for all groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal:    Include                   Exclude                   Seek further info.

Comments (Including reason for exclusion)

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### JBI Critical Appraisal Checklist for Descriptive / Case Series

Reviewer ..... Date .....

Author ..... Year ..... Record Number .....

	Yes	No	Unclear	Not Applicable
1. Was study based on a random or pseudo-random sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the criteria for inclusion in the sample clearly defined?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Were confounding factors identified and strategies to deal with them stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were outcomes assessed using objective criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If comparisons are being made, was there sufficient descriptions of the groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was follow up carried out over a sufficient time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal:    Include                   Exclude                   Seek further info

Comments (Including reason for exclusion)

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### JBI Critical Appraisal Checklist for Comparable Cohort/ Case Control

Reviewer ..... Date .....

Author ..... Year ..... Record Number .....

	Yes	No	Unclear	Not Applicable
1. Is sample representative of patients in the population as a whole?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are the patients at a similar point in the course of their condition/illness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Has bias been minimised in relation to selection of cases and of controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are confounding factors identified and strategies to deal with them stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are outcomes assessed using objective criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was follow up carried out over a sufficient time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal:    Include                   Exclude                   Seek further info.

Comments (Including reason for exclusion)

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## Appendix II: Data extraction instruments - MASTARI data extraction instrument

### JBI Data Extraction Form for Experimental / Observational Studies

Reviewer ..... Date .....

Author ..... Year .....

Journal ..... Record Number .....

#### Study Method

RCT                       Quasi-RCT                       Longitudinal   
Retrospective                       Observational                       Other

#### Participants

Setting \_\_\_\_\_

Population \_\_\_\_\_

#### Sample size

Group A \_\_\_\_\_ Group B \_\_\_\_\_

#### Interventions

Intervention A \_\_\_\_\_

Intervention B \_\_\_\_\_

Authors Conclusions:  
\_\_\_\_\_  
\_\_\_\_\_

Reviewers Conclusions:  
\_\_\_\_\_  
\_\_\_\_\_

**Study results**

**Dichotomous data**

Outcome	Intervention ( ) number / total number	Intervention ( ) number / total number

**Continuous data**

Outcome	Intervention ( ) number / total number	Intervention ( ) number / total number

Conclusions	Illustration from Publication (page number)	Evidence		
		Unequivocal	Credible	Unsupported

Include

Yes

No