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Implementation leadership: A concept analysis

Sonia A. Castiglione^{1,✉} PhD Student, Part-Time Faculty Lecturer

Email sonia.castiglione@mcgill.ca

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AQ2

¹ Ingram School of Nursing, McGill University, Montreal, QC, Canada AQ3

Correspondence

Sonia A. Castiglione, Ingram School of Nursing, McGill University, 680 Sherbrooke West, Suite 1800 Montréal, QC, H3A 2M7 Canada.

Email: sonia.castiglione@mcgill.ca

Abstract

Aim To analyse the concept of implementation leadership (IL) in health care and nursing literature.

Background Implementation leadership has emerged as a type of leadership that is lacking but required for the successful implementation of evidence-based practices (EBPs). A concept analysis of IL can help identify, clarify and apply this concept to inform strategies for nursing leadership development.

Method A concept analysis using Rodger's evolutionary method identified attributes of IL, and the context in which it is expressed including antecedents, consequences, references and surrogate terms. Forty-two articles were analysed following a Boolean search of MEDLINE and CINAHL databases.

Results Implementation leadership Implementation leadership was previously abbreviated as "IL"

I am fine with leaving it in its long form, as the sentence is defining this term.

is a specific and strategic approach to leadership characterized by a set of influencing behaviours leading to positive outcomes for the implementation of EBPs.

Conclusion The concept analysis describes an evolving term that requires further clarification. This analysis contributes to an expanding knowledge base for capacity-building strategies for EBP implementation in nursing and health care.

Implications for Nursing Management Effective IL, specifically in nurse managers, may be key in facilitating the implementation process for future successes. Nursing managers can build on a foundation of general leadership practices and consider the role of other members of the nurse leadership team in IL.

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Keywords

concept analysis; evidence-based practice; implementation; nursing leadership

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1. BACKGROUND

Change in health care is the new steady state, as the goal of providing quality care based on up-to-date research evidence requires continuous practice adaptation (IOM 2009; Rehfuess et al., 2015). A major strategy to promote safe and effective nursing care is the implementation of evidence-based practices (EBPs; CNA, 2010), which integrate theory-derived and empirically based information with the needs and preferences of individuals and groups of patients (Ingersoll, 2000). Rates of falls by the elderly, prevention of pressure injuries and timely pain management are examples of nursing-sensitive outcomes that have improved with the implementation of EBPs (VanDeVelde-Coke et al., 2012). As high-quality nursing and health care has become synonymous with EBP, nurses at all levels are charged to continuously question their practice and seek out appropriate and high-quality evidence to improve patient health outcomes (Melnik et al., 2018).

Despite requirements for continuous improvement in health care delivery, the integration of EBPs by nurses remains a significant challenge (Yoder et al., 2014). Typically, a 17-year time lag exists for transferring knowledge from research into health care practice (Balas & Boren, 2000). A number of barriers have been identified that contribute to this gap, including unfavourable attitudes towards EBPs, inaccessibility to technology and computer systems, limited training on finding and implementing research knowledge and strained resources (Grimshaw, Eccles, Lavis, Hill, & Squires, 2012; Tacía, Biskupski, Pheley, & Lehto, 2015). Another important barrier is lack of awareness of the surrounding or contextual factors that may support or thwart efforts to implement and sustain EBPs (Kueny, Shever, Lehan Mackin, & Titler, 2015). Deeper understanding of these factors and their impact on

the uptake of EBPs has become a major research focus for implementation science in the past decade (Eccles et al., 2009).

Leadership may be a critical contextual factor that influences the successful implementation and integration of EBPs in health care. A recent systematic integrative review by Li, Jeffs, Barwick, and Stevens (2018) found that multiple features of the organisational context influence EBP implementation such as culture, communication and networks, and resources. In their review, leadership appeared to influence these other factors and was the key enabler to creating a context conducive for implementation of EBPs. Moreover, nurses at the frontlines report significantly more research use when in 'better contexts' characterized by good leadership (Cummings, Estabrooks, Midodzi, Wallin, & Hayduk, 2007). Good leadership for EBP implementation involves leadership that is engaged in the implementation process and in establishing EBP as the norm in the setting (Bianchi et al., 2018; Damschroder et al., 2009; Hauck, Winsett, & Kuric, 2013; Stetler, Ritchie, Rycroft-Malone, & Charns, 2014). However, literature suggests that nurse leaders are falling short of the type of leadership needed to influence adoption of EBPs (Wilkinson, Nutley, & Davies, 2011). In addition, nursing staff cited the resistance of nurse leaders as a major challenge in EBP implementation (Melnyk, Fineout-Overholt, Gallagher-Ford, & Kaplan, 2012). This may be due to a lack of formal training for nurse leaders to support implementation of EBPs (Farokhzadian, Khajouei, & Ahmadian, 2015). Therefore, there is a need to develop nursing leadership for successful EBP implementation to meet health care delivery expectations.

The concept of implementation leadership (IL) has recently emerged as the type of leadership critical for the successful implementation of EBPs (Aarons, Ehrhart, & Farahnak, 2014). Capacity-building interventions have been pilot tested to strengthen IL in nursing and other disciplines with mixed but promising outcomes (Aarons, Ehrhart, Farahnak, & Hurlburt, 2015; Gifford et al., 2013; Kvsist, Tahka, Ruotsalainen, & Terveo-Heikkinen, 2014; Richter et al., 2016; Tistad et al., 2016). To better equip nurse leaders to enable successful EBP implementation, clarification of the concept of IL is needed to increase our understanding of how it can be identified, applied and supported. A formal concept analysis of IL has not yet been conducted and is timely to help respond to the persistent challenge of limited successes in EBP implementation.

2. PURPOSE AND FRAMEWORK FOR ANALYSIS

This paper presents a concept analysis of 'implementation leadership' in the scientific health care literature. This includes an exploration of the emergence of the term, its current uses and characteristics, the context within which it is used and any distinctive descriptions of the concept within the domain of nursing. The analysis is based on Rodgers' evolutionary view of concepts (2000). According to this view, concepts (typically expressed by a word or words) represent characteristics of specific phenomena that are shaped by time and social context. Concepts are therefore not static or universal, as perceived by other approaches (Morse, Mitcham, Hupcey, & Tason, 1996; Walker & Avant, 2005), but evolve in meaning and application. Periodically taking stock of the current meaning of a concept can help guide its future use and application in research and practice. Therefore, Rodgers is an appropriate method for this analysis, as IL is gaining popularity and importance in the health implementation science literature.

3. METHODS

An inductive analytic approach was used to analyse the common uses of IL as a concept. The primary activities consistent with Rodgers (2000) included: (a) concept identification; (b) selection of an appropriate realm (setting and sample) for data collection; (c) data collection from primary sources to identify the attributes of implementation leadership and its surrogate terms, the contextual basis within which it is used including the referents, antecedents, consequences and related concepts; (d) thematic analysis and frequency calculation of data categories; and (e) exemplar identification in the literature to illustrate a practical application. No exemplar from the literature was found to represent all the identified characteristics.

3.1. Sample selection and data collection procedures

Using a Boolean search strategy with truncated keywords, a search of MEDLINE and CINAHL databases was conducted for peer-reviewed health care articles indexed from 1937–2018. Keywords were determined by reviewing the target articles and through the author's personal knowledge of the field (Table 1). The search yielded a total of 240 articles. Duplicates, language other than English or French and irrelevant articles based on title or abstract were removed. All articles that contained the exact term 'implementation leadership' ($n = 25$) found in the title or abstract were retained in the final sample. The remaining articles ($n = 30$) were grouped into nurse and non-nursing practice domains based on first author credentials or affiliation, or the journal discipline. As per Rodgers, a random sample of citations (20% from each of these two domains) was further retained for analysis. This was to ensure comparison of the concept between the two domains. Finally, an additional 10 articles were added following a review of reference lists and a cited reference search. Each article was then read once to gain the general tone of the sample. In a second reading, text was retrieved if it appeared to contain a definition, surrogate terms, attributes, antecedents, consequences, related concepts, theories related to and/or tools measuring IL. Labels were constructed from the text and were then reviewed and collapsed into categories describing the major aspects of the concept. Impressions and thoughts about the data were documented during this process and then reviewed in the writing of this report. The frequency for each category was calculated.

Table 1 Keywords derived from key concepts

Concepts	Keywords
Implementation	Implement* Knowledge translation

Concepts	Keywords
Leadership	Lead* Effective* Facilit* Inspire* Transform* Model
Implementation leadership scale (concept initially introduced as a measurement tool)	‘Implementation leadership scale’ Scale Measure* Assess*
Full term: ‘Implementation leadership’ searched in title and abstract.	

*Use of truncated word.

4. RESULTS

A final set of 42 articles was analysed. All were peer-reviewed articles or abstracts published between 1993 and 2018 (Appendix S1). Study designs, settings and country of origin varied across and between groups. Only non-nursing articles described the development or validation of a tool for IL. However, both groups included articles that presented theoretical models exploring the concept. The majority of studies in the sample were conducted in North America (USA and Canada) and Sweden. All of the Canadian studies were from the nursing domain. Finally, one author (Gregory A. Aarons) dominated the publications appearing in 38% of the sample and in nine articles (21%) as the first author and as co-author in one nursing article (Gifford, Graham, Ehrhart, Davies, & Aarons, 2017).

4.1. Emergence of the concept, surrogate terms and definitions

The concept of IL appeared only very recently in health care literature. The first instances of the concept in this sample were by Andrews (1993). In 2014, Aarons et al first coined the term ‘implementation leadership’ in a study that validated a tool measuring the concept (The Implementation Leadership Scale). Since that time, the term ‘IL’ was swiftly adopted

in the literature, appearing in 62% of the sample with most of the studies citing the sentinel paper by Aaron et al. However, it was more frequently used in non-nursing articles (76%) compared to nursing articles (10%) reviewed. In the nursing literature, Gifford et al. (2017) were the first to use the term in a study that aligned a theoretical model for leadership in implementation with The Implementation Leadership [scale](#) Scale. The use of the concept peaked in 2018 with 29% of the sample using the term in the nursing ($n = 4$) and non-nursing literature ($n = 8$).

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The use of surrogate terms were mostly in the nursing literature and included specific to general expressions of the concept including *leadership support for EBP* ($n = 1$), *EBP supportive leadership* ($n = 1$), *leadership for process of implementing EBP* ($n = 1$), *managerial leadership for EBP use* ($n = 2$), *unit leadership* ($n = 1$) and *nursing leadership* ($n = 3$). In both nursing and non-nursing literature, *leadership* ($n = 9$) was often used as a surrogate term and usually qualified with words such as supportive, effective or strong.

A definition for IL was given in 10% of the papers in the sample. Three original definitions were stated and an additional four studies adapted these original definitions (Table 2). Gifford et al.'s (2017) most recent definition represent a broadly applied and general description of IL, whereas Aarons, Ehrhart, Moullin, Torres, and Green, (2017) and Aarons, Ehrhart, Torres, Finn, and Beidas (2017) defined IL as a description of general behaviours. Finally, Shuman et al. (2018) narrowly defined the concept within the discipline of nursing and names a distinct leadership role: nurse managers. The definitions contained common elements including the mention of behaviours and impact on implementation but varied in their specificity. The definitions and instances of the concept in the literature were used to inform the selection of attributes for IL.

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Table 2 Definitions of Implementation Leadership

Reference	Definition
Gifford et al. (2017)	'Implementation leadership is a multidimensional process of influence that enables clinical staff to use evidence in their clinical decision-making and includes activities and behaviours of unit-level managers and supervisors that influence staff, their environment and organisational factors that influence implementation'. (p. 16)
Aarons, Ehrhart, Torres, et al. (2017)	'Behaviours that fall on four dimensions of being knowledgeable about the EBP being implemented, proactive and anticipatory problem solving, supporting other in the implementation process and persevering through the ups and downs of the implementation process'. (p. 2)
Shuman et al. (2018)	'The specific leadership behaviours enacted by nurse managers to facilitate EBP implementation and foster an EBP climate on their unit'. (p. 4)

4.2. Attributes

The attributes refer to a grouping of characteristics that define and exist to some degree in all instances of the concept in use. Three attributes were found.

4.2.1. Strategic and specific approach to leadership

Implementation leadership differed from general leadership and is deliberately applied to ensure the effective implementation of EBPs. Leaders were assumed to have general leadership behaviours as a function of their role within an organisation to provide a foundation for a positive working environment, clear roles and effective teamwork. However, in the context of a definitive goal, such as the implementation of specific EBPs, a strategic leadership approach was required. A distinct set of knowledge, skills and strategies is needed by leaders at the front lines to lead and provide guidance to those responsible for adopting new practices. Knowledge and skills in developing IL were seen as complimentary competencies to general leadership for health care leaders.

4.2.2. Set of influencing behaviours

Behaviours were intended to have influence over the implementation process and staff in the uptake and use of EBP. Some studies did not articulate specific behaviours, whereas others outlined a range of behaviours within a framework or expressed as items in a measurement tool (Table 3). Articulated behaviours were made mostly in reference to those initially expressed by Aarons and Gifford. Aarons et al.'s Implementation Leadership Scale (2014) was the most prominent scale used to describe behaviours of leaders to support the implementation of EBPs both in non-nursing (*n* = 15) and nursing literature (*n* = 2). Informed by the Full Range Leadership Model, it describes specific leadership behaviours for proactive leadership, knowledgeable leadership, supportive leadership and perseverant leadership. Gifford et al. (2017) described similar IL behaviours but categorized them as relation- or change-oriented behaviours consistent with the Behavioral Leadership Model and included an additional set of behaviours labelled as task-oriented behaviours. This categorization of behaviours was equally expressed in nursing (*n* = 5) and non-nursing literature (*n* = 4). Other influencing behaviours were identified that did not reference Aarons or Gifford. For example, Mosson, Schwarz, Richter, and Hasson (2018) and Mosson, von Thiele Schwarz, Haaon, Lundmark, and Richter (2018) scale measured active versus passive leadership behaviours consistent with the Full Range Leadership Model. Active behaviours were more consistent with implementation leadership and passive behaviours were not. Stetler et al. (2014) described functional, strategic and cross-cutting leadership behaviours to achieve regular uptake of EBPs stemming from Functional Leadership Theory. Therefore, influencing actions consistent with IL were often represented across the sample but categorized in alternate ways.

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Table 3 Described implementation leadership behaviors

Reference	Leadership Model	Implementation leadership behaviors
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Reference	Leadership Model	Implementation leadership behaviors
Aarons et al. (2014)	Full Range Leadership Model	Proactive Leadership: Planning and removing obstacles to EBP Implementation
		Knowledgeable Leadership: Ability to communicate benefits of EBP
		Supportive Leadership: Recognizes, appreciates and supports employee efforts in learning and using EBPs
		Perseverant Leadership: Carries on through challenges of implementing EBP
Gifford et al. (2017) ^{AQ7}	Behavioral Leadership Model Informed Ottawa Model of Implementation Leadership	Relation-Oriented: Recognizes change efforts; supports change visibly and symbolically; facilitates interprofessional consensus; communicates with staff about EBP and issues
		Change-Oriented: Demonstrates commitment; reinforces vision and goals; understands and acts on change issues; advocates internally and externally
		Task-Oriented: Clarifies roles and responsibilities; modifies documentation forms; procures resources, professional development, policies to support change; monitors performance and outcomes; gives reminders; leads regular leadership meetings
Mosson, Thiele Schwarz, et al. (2018)	Full Range Leadership Model	<p>Active: Behaviours consistent with implementation leadership</p> <ul style="list-style-type: none"> • Exemplary behaviours: determination, communication of values and beliefs, active in implementation processes, commitment to change, positive outlook • Individualized consideration: taking time with individual staff, gives staff opportunity to voice concerns • Intellectual stimulation: engages staff, encourages staff to voice opinions, communicates information and knowledge • Contingent reward: acknowledges and appreciates staff performance

Reference	Leadership Model	Implementation leadership behaviors
		Passive: Avoidance and procrastination behaviours inconsistent with implementation leadership: avoids intervening until major issues arise, waits for issues to go wrong before intervening; avoids decision-making affecting implementation
Stetler et al. (2014)	Hierarchical Framework Of Leadership Behaviors	Functional: Intervening in EBP education and development, role modelling, implementing specific EBPs, monitoring and providing feedback
		Strategic: Planning, organizing and aligning
		Cross-Cutting: Strategic thinking, communicating, building and sustaining EBP culture

4.2.3. Implication of positive outcomes

Implementation leadership was characterized as having a positive impact on the uptake or implementation of EBP. IL was most commonly qualified as supportive, facilitative, effective or helpful. It was also frequently described as being a 'strong leadership' style or characteristics consistent of a 'strong leader'. The opposite effect that is the absence or weak presence of specific IL behaviours leading to unsuccessful uptake of research was mentioned less frequently ($n = 3$). In these instances, the leadership approach was considered unsupportive, hindering and even disruptive in achieving successful outcomes. In the same vein, the absence of leadership behaviours was described as weak or negative leadership. Therefore, IL was synonymous with success.

4.3. Context

An analysis of the context provides knowledge on the events, situations or phenomena for which the concept is used (references), the situations that precede (antecedents) and proceed the concept (consequences), and related concepts that are distinct but connected to IL. The context may refer to a specific situation, a time period or a health care discipline.

4.3.1. References

Implementation leadership was situated within a diverse health care landscape. In nursing-related articles, this included acute care hospital units ($n = 4$), long-term care ($n = 1$) and homecare ($n = 1$) or generally across all health care settings ($n = 5$). One nursing study described IL in the context of mHealth, (the use of technology in health care), which was unique for the entire sample (Ronquillo, Dahinten, Bungay, & Currie, 2018). Within non-nursing articles, 18 were situated within community mental health or social care organisations.

Implementation leadership was also used in reference to individual roles occupied by leaders within the organisational context. The term 'leader' was most commonly employed and used in reference to a first-level or front-line leader or as a synonym for a 'manager'. When the term 'manager' was used in the non-nursing literature, it was vague and could refer to manager roles such as 'middle', 'senior' or 'upper' managers. In the nursing articles, 'managers' typically referred to *nurse managers* at the front-line or point of care, who were expected to have the knowledge and skills required for IL behaviours. In nursing, roles such as advanced practice nurses or other non-specific, formal or informal roles such as administrators, professionals and champions were also described as leaders. In one instance, IL was described for volunteers, representing an atypical leadership role (Goldstein, Sapere, & Daviau, 2017). Therefore, managers appear to be important but other roles were also considered for IL.

In the sample, the use of IL was exclusively in reference to improving the delivery of health care, through a change in the behaviours and practices of health care practitioners and decision-makers. Within this frame, IL was discussed as a critical factor in the organisational context that interacts with other factors to influence EBP uptake. The organisational context was sometimes referred to as the inner context in non-nursing literature, which is a domain that influences efforts to implement practice changes within the Consolidation Framework for Implementation Leadership (CFIR; Ehrhart et al., 2018; Mosson, von Thiele Schwarz, Haaon, et al., 2018). Other factors, including a context of learning, culture, networks, resources and monitoring and feedback mechanisms within the organisation, coupled with the concept to influence the implementation of EBPs, were included. In this sample, there was general discussion of the mechanisms of influence by these factors on IL or vice versa.

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4.3.2. Antecedents

Implementation leadership was generally preceded by the implementation of a specific evidence-based practice, intervention or tool. This included specific practices, treatment programs, clinical practice guidelines, practice modules, care bundles and clinical pathways. IL is only possible if it exerts influence on a group of individuals, regarded as employees, implementers, staff or teams that had a role in providing care. Finally, competency in implementation practices and specific leadership behaviours were antecedents of IL. Several studies implied that this deficit in knowledge, skills and attitudes necessitated the development of interventions to improve behaviours of individual leaders or levels of IL within the organisational context.

4.3.3. Consequences

The resulting successes of IL were described as the effective implementation of EBPs or the uptake of research. More proximally, IL exerted an effect on the climate for implementation, which was overwhelmingly positive for a majority of the studies. IL promoted, created and improved the implementation climate and as a result became supportive, strategic, favourable, open, responsive and conducive to EBP implementation. IL was also a precursor to positive attitudes towards EBPs of employees or service providers in some studies. It was not clear whether this was in reference to general attitudes towards EBPs or for an identified practice change. Additionally, non-nursing

studies made mention of the impact of IL on implementation citizenship (Aarons, Ehrhart, Torres, et al., 2017; Finn, Torres, Ehrhart, Roesch, & Aarons, 2016; Lyon et al., 2018; Powell et al., 2017), which are the behaviours by staff that support EBP. These studies proposed implementation citizenship as a mediating variable between IL and implementation climate. Therefore, IL behaviours played a role in bolstering non-existent or inadequate contexts for EBP implementation.

4.3.4. Related concepts

Implementation leadership was viewed as a sub-component and simultaneously as a complimentary form of *transformational leadership* in both nursing and non-nursing literature. A flexible and supportive leadership style, transformational leadership, stems from the Full Range Leadership Model (Bass & Avolio, 1994) and is the gold standard of leadership approaches. Also from this model, *transactional leadership* involves behaviours that promote compliance through rewards and punishments and was also described as complimentary to IL, but less often. In two nursing studies, *managerial leadership* was discussed as being similar to but not equivalent to IL (Gifford et al., 2018; Shuman et al., 2018). Finally, IL was seen as distinct but with shared attributes to a newer concept of *leadership for sustainment of EBPs* (Ehrhart et al., 2018).

5. IMPLICATIONS FOR NURSING MANAGEMENT

Following this concept analysis, IL can be described as a strategic approach to leadership characterized by influencing behaviours to promote success in the implementation of EBPs.

Implementation leadership is a relatively new concept that prominently emerged in the 2010s with the push to reduce the evidence-practice gap. The newness of this concept has implications for its overall clarity and specificity in attributes, and on implications for supporting and developing effective nurse leaders for EBP implementation. Firstly, the literature situates IL within an American and westernized health care system with a particular view of desirable, engaging and effective leaders. This may differ when IL is contextualized within other systems of varying resources, communication network mechanisms, access to technology, government oversight and hierarchical management (Schütte, Acevedo, & Flahault, 2018), and/or with other sociocultural populations. Characteristics of leaders that are perceived by staff as being desirable and engaging may have alternate conceptualizations among different sociocultural populations (Gelfand, Erez, & Aycan, 2007). Moving forward, research in IL may benefit from a diversity of perspectives and contexts in order to expand the application of the concept.

Secondly, the analysis reveals ambiguity between transformational and implementation leaderships despite their distinct designations. Transformational leadership consists of an adaptive leadership that motivates and influences followers to support a greater good and shared responsibility (Doody & Doody, 2012), is linked to supportive, adaptable and high-quality health care environments (Sfantou et al., 2017) and has qualities that are promoted in nurse managers (Robbins & Davidhizar, 2007). Both leadership practices include behaviours that are supportive of change and can be influential in changing others' behaviours. This justifies further concept clarification. Also, the analysis suggested transformational leadership as foundational for IL, where IL is seen as strategically used in

specific circumstances. Therefore, leadership training to facilitate change and EBP implementation should build on strong general leadership behaviours as a specialized leadership practice.

What is more, though for those in formal managerial roles (such as nurse managers) appear to engage in IL behaviours, the role of other leaders is important in influencing successful implementation of EBPs. Within nursing, other front-line formal leaders typically exist within the nursing leadership team and act as complimentary to one another in EBP efforts. (CNA, 2014; Fleischer, Semenic, Ritchie, Richer, & Denis, 2015; Milner, Estabrooks, & Humphrey, 2005; Moseley, 2012). These leaders may not have direct control over managing resources but can be particularly influential in introducing evidence for practice change, offering educational opportunities, coaching and role modelling for staff, and conducting audit and feedback. This collective and shared leadership warrants a closer look with the applications and development of IL in health care.

6. LIMITATIONS

Only keywords were used in the search strategy, whereas more diversity in the pool of relevant articles could have been obtained with subject headings. Similarly, the search was conducted exclusively in health care and nursing databases. Implementation and change management are important in management and organisational behaviour practices (Ke & Wei, 2008). As the context changes, a different perspective of attributes, references, antecedents and consequences can emerge and therefore readers should consider this in the transferability of the knowledge gained from this analysis.

7. CONCLUSION

Successful research uptake is an important priority for health care but is complex and difficult. Effective leadership, specifically in nurse managers, may be key in facilitating the implementation process for future successes. This analysis offers an updated understanding of implementation leadership, although significant ambiguity remains of the concept remains. Ongoing evolution of the concept is therefore needed to better inform leadership strategies to reduce the knowledge-practice gap in health care.

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Supplementary Material There is a supplemental file. Will this be indicated here?

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