

## Evidence in nursing leadership development through action research: an integrative review

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Received: 05/09/2017.

Accepted: 08/10/2017.

Published: 11/28/2017.

### Suggest citation:

Rocha BS, Munari DB, Ribeiro LCM, Rego PG. Evidence in nursing leadership development through action research: an integrative review. Rev. Eletr. Enf. [Internet]. 2017 [cited \_\_\_/\_\_\_/\_\_\_];19:a41. Available from: <http://dx.doi.org/10.5216/ree.v19.46827>.

### ABSTRACT

This study's goal was to identify evidence of the effects of using action research in nursing leadership development. This is an integrative review of the literature conducted in 2016, guided by the descriptors *action research* and *nursing*, which included a total of eight articles. Most studies were conducted in the hospital context, including descriptive qualitative studies whose objective was to analyze the process of changes in the practice of nurses. Regarding the evidence in nursing leadership development, the articles indicated the importance of a shared decision-making process as a critical skill for leadership. The joint construction of management tools proved to be essential to support changes in practice, especially regarding the continuity and maintenance of qualification of leadership professionals.

**Descriptors:** Nursing Administration Research; Leadership; Qualitative Research; Health Management; Nursing.

### INTRODUCTION

Nurses are strategic professionals for health management as well as transformation agents, due to their expressive performance in leadership<sup>(1)</sup>, considered in this study to be an ability of interpersonal influence exerted and concretized when the leader inspires and is validated by his or her peers and generates new leaders<sup>(2)</sup>. For this reason, it is so important for nurses to invest in the constant improvement of good leadership practices based on emotional, cultural, and political intelligence; financial acumen; good communication skills; knowledge about the environment and climate of the organization; and a focus on people management<sup>(1-4)</sup>.

A study conducted in Brazil on the knowledge produced by nursing, specifically related to the area of management<sup>(5)</sup>, which includes studies on leadership, pointed to the need to advance in the development of

more theoretical studies and more robust design to produce a greater impact on the practice.

Studies that address this theme have indicated that improvement in the performance of nurses in leadership requires the development of self-knowledge<sup>(1,3,5)</sup>, relational skills with an emphasis on assertive communication and teamwork<sup>(6)</sup>, and innovation in training processes to increase the visibility of the work performed by these professionals<sup>(4)</sup>. These actions indicate that leadership in nursing is expected to be effective and transformative, aligned with the foundations of transformational leadership, characterized by the leader's ability to inspire and train followers and guide them toward changes based on an ethical and responsible commitment to the results<sup>(7)</sup>. This style of leadership positively influences the organization's culture and results with patients<sup>(7)</sup> and it is considered in this study an adequate model for advances in nursing.

In a non-systematic review of the literature on this subject, we observed a recurrent recommendation in the studies: the need for nurses to improve their knowledge related to leadership, as well as the need to use methodologies of greater impact on the practice.

These elements drove the development of this study, focused on identification in the literature of interventions for the development of leadership skills in nursing.

A review of this theme showed that action research was a method cited in several studies, indicating that the intervention enabled changes and construction of new knowledge. The possibilities of transformation during the development of studies of this nature emerge as participants and researchers analyze the situation to be studied<sup>(8)</sup>.

The use of action research as a research method is not very precise. Social psychologist Kurt Lewin is responsible for the creation and dissemination of this research process in the 1940s with the creation of T-groups (training groups) whose objective was to force individuals to think about their own actions as a means of developing knowledge and improving their actions<sup>(9-10)</sup>.

Since then, the method has been increasingly used, allowing participants and researchers to build new strategies together for the implementation of changes. Action research can be understood as a type of research with simultaneous investigation and action, applied when both the researcher and the participants are collectively interested in solving problems. Its development foresees the resolution of daily situations, requiring attitude changes in practice, and is characterized by participant engagement and training<sup>(8-12)</sup>.

Considering that knowledge production in action research foresees an impact in practice, this study sought to identify its applicability towards changes in leadership practice. The objective of this study was to then identify evidence of the effects of using action research on nursing leadership development.

## METHODS

This is an integrative review of the literature whose purpose is to gather and synthesize research results in a systematic and orderly manner. This type of study aims to analyze the theme in detail, producing knowledge that can guide the practice and critical knowledge<sup>(10)</sup>.

This review was developed in stages: theme identification and selection of the research question; definition of inclusion criteria; categorization; evaluation and interpretation of results; and finally, presentation of knowledge review/synthesis<sup>(13-14)</sup>.

A guiding question was used in this study: What effects or changes does the use of action research promote in nursing leadership development?

The search for articles was conducted on the PubMed (the National Library of Medicine) and LILACS (Latin American and Caribbean Literature in Health Sciences) websites and the inclusion criteria were: full-text original article; available in Portuguese, English, Spanish or French; related to the past 10 years; and presenting methodological rigor in conducting action research in the development of leadership skills in nursing. Although the initial idea was to consider the past five years, the shortage of material forced the researchers to broaden the search to the past 10 years to ensure greater consistency in the review.

For the methodological rigor judgment, the inclusion of the articles considered those presenting the four stages of the basic investigation cycle<sup>(10)</sup>. According to the cycle, the first two stages comprise the action and correspond to the diagnosis/recognition of the research field reality and the action itself. The other stages are related to the investigation process, which involves the monitoring and description of the effects of the action and evaluation of its results<sup>(10)</sup>.

The search was conducted in October 2016, guided by the descriptors *action research* and *nursing* to view the greatest number of studies that addressed the theme. This search resulted in a total of 1,889 studies.

The details of the search to obtain the studies for this review are described in Figure 1.

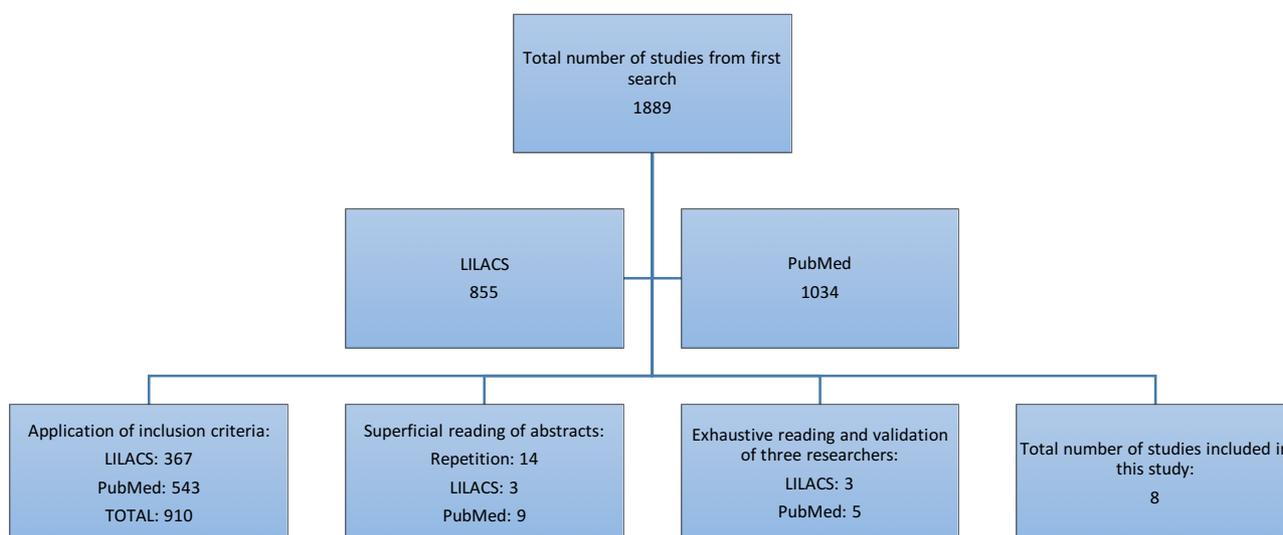


Figure 1. Details of the search to obtain the studies for this review.

The analytical process was conducted concomitantly by four researchers working in pairs for validation. The first stage referred to the application of the inclusion criteria, totaling 910 studies. The studies focused on leadership development were selected by reading all titles and abstracts, followed by reading full articles that, in the first analysis, addressed the theme.

The selected articles were read exhaustively and their data were extracted and organized in a protocol previously developed with relevant information to answer the research question. In this process the focus was on: study objective; methodological rigor and methodological reference; results achieved; seeking evidence of the effects of using action research in nursing leadership development; resulting changes; and study recommendations/limitations.

After this procedure, eight studies were validated and included in this review, and their findings were organized in a table for subsequent descriptive analysis, interpretation, and presentation of a synthesis for the review content.

## RESULTS

Table 1 summarizes the data found in the studies included in this review, illustrating the effects of using action research in the development of nursing leadership skills.

**Table 1.** Evidence of Effects and Changes Resulting From Using Action Research in the Development of Leadership Skills in Nursing.

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Šuc, Prokosch, Ganslandt / Methods Inf Med / (2009) / Applicability of Lewin’s change management model in a hospital setting / Germany</p>	<p><b>Objective:</b> - Assess the applicability of Kurt Lewin’s change management method to a computer inclusion project at a German university hospital.</p> <p><b>Study context:</b> - Action research based on Kurt Lewin’s change management model. This study is part of a more comprehensive project conducted at the University Hospital of Erlangen in Germany on the management of surgical material through a computerization process in the institution, in order to overcome social and technological barriers identified among the nursing staff. The intervention lasted three months and covered 15 hospital surgical specialties, involving all nursing teams in the hospital.</p>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>- Discussion workshops were held in the unfreezing stage, allowing collective understanding of the real objectives of the project, ensuring that the opinions and knowledge of the nursing team were considered as highly relevant in the implementation of the change process of surgical material management.</li> <li>- In the implementation of changes, one person was elected to be in charge of the inclusion of the new concept of material registration in each operating room, which became the local reference for training and support in the computer technology deployment.</li> <li>- In the refreeze stage, process adjustments created common codes to identify records of missing/incomplete materials in the computer system; tasks were integrated into the workflow of regular records; and individual reports were developed for newly documented material consumption data.</li> </ul>	<p><b>Evidence of effects or changes:</b></p> <ul style="list-style-type: none"> <li>- Better control of surgical material processing</li> <li>- Adherence of the nursing team to the institutional project, overcoming initial barriers and lack of credibility in the change process</li> <li>- Empowerment of nurses in leading the change process</li> <li>- Appreciation of the nursing team in the institution’s decision-making processes</li> <li>- The responsibility for future maintenance of the equipment was transferred to the nursing team, at their request</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>- When applying this model, the institutional characteristics and the support for change implementation should be taken into account.</li> <li>- The application of the method should be encouraged not only in projects of large IT systems, but also for changes in simpler processes.</li> </ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- The study was limited to the nursing staff.</li> </ul>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>MacPhee, Wardrop, Campbell / Journal of Nursing Management / (2010) / Transforming workplace relationships through shared decision-making / Canada</p>	<p><b>Objective:</b> - Analyze the Donabedian’s Structure-Process-Outcomes (SPO) linkages related to nurse-nurse leader shared decision-making around workload issues.</p> <p><b>Study context:</b> - Action research based on the concepts of Kurt Lewin, organized through cycles of planning, action, and reflection, analyzing the structure and process relationships among the project team members, including the front-line leader, and between the project team and the organizational leadership, usually the leader of mid-level operations. The study shows part of a three-year project that included intervention through monthly meetings; eight-hour weekly releases to work on the project; and evaluation of the impact of the project on the institution.</p>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>- The conflict was understood as a determining factor in shared decision making because each team presented an associated conflict that blocked the whole process. Conflict management was then added as an important sub-process in the project.</li> <li>- The delivery of the projects by the teams represented a successful completion of the process. Short-term actions were appreciated by the teams, whose members felt valued, active, and autonomous with the accomplishment of actions.</li> <li>- A higher degree of independence combined with the initiative of each team and negotiation power for project achievement.</li> <li>- Strengthening of effective structure and process linkages among the team members and between teams and their leaders, leading to positive results.</li> </ul>	<p><b>Evidence of effects or changes:</b></p> <ul style="list-style-type: none"> <li>- Conflict management and construction of strong relationships with each other led to the definition of a “new identity” and the redefinition of common goals of the teams.</li> <li>- New feelings were experienced by teams, such as pride and enthusiasm for their joint projects.</li> <li>- Leaders have transformed their relationships with the teams by providing independence and autonomy to the teams.</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>- There is a need for organizational support in the sustainability of shared decision-making.</li> <li>- Interventions of this dimension should start with an analysis of the real potential for conflict between team members, and between teams and their direct leaders and organization leaders.</li> </ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- There is a need for detailed analyses of each particular case, which somehow influenced the results.</li> </ul>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Bucchi, Mira / Rev. Esc. Enferm. USP / (2010) / Redesigning the nurse admission training process in the intensive care unit / Brazil</p>	<p><b>Objective:</b> - Analyze and restructure the process of admission training (AT) of nurses in the intensive care unit (ICU), from the perspective of hospital nurses.</p> <p><b>Study context:</b> - Action research based on Thiollent’s reference involving the stages of diagnosis, intervention, and evaluation. The study was conducted in the ICU of a private hospital with nurses presenting at least three years of service. Eleven nurses participated in the study, which used an in-person focal group and e-mail communication. Six meetings were held from March to May 2008.</p>	<p><b>Results:</b> - The study enabled the re-elaboration of the AT process in the ICU, including the creation of a new concept, objectives, definition of the desired profile for the admitted staff, goals to be achieved during the AT, time, strategies, and needs. In addition, a flowchart of complexities/competences was developed for the expected actions of nurses. The evaluation processes for the AT and the nurse instructor profile were defined.</p>	<p><b>Evidence of effects or changes:</b> - AT adaptations - Self-reflection of the nurses participating in the study in terms of what they expect from a professional and the professional they have been, especially regarding the professional autonomy of nurses in the ICU.</p> <p><b>Recommendations:</b> - Carefully evaluate the AT results as an initial step in the educational process that trains a critical-reflective, ethical-political professional that should not be supplanted. - The AT should be seen as an investment by the institution to ensure the survival of the institution in the increasingly competitive healthcare market.</p> <p><b>Limitations:</b> Time dedicated to the intervention (10 hours).</p>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Motta, Munari, Nunes / Rev. Eletr. Enf. / (2011) / Intervention for managers' nurse development in a public hospital based on action research / Brazil</p>	<p><b>Objective:</b> - Describe the nurse manager's development process to achieve better professional performance.</p> <p><b>Study context:</b> - Action research based on Kurt Lewin's concept, conducted in a public hospital with 24 nurse managers linked to the Nursing Board, their supporting teams, and those who performed coordination activities in the various hospital units. These managers will have performed this coordination, management, or supporting role for at least one year. Twenty-four-hour biweekly meetings were held, totaling 80 hours of intervention.</p>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>- <b>Exploratory and diagnostic stage:</b> The group made a broad reflection on the role of management to ensure process systematization in the units, ensuring health quality and humanization, and defined actions to improve the role of management.</li> <li>- <b>Intermediate stage:</b> Due to the evidence of limitations in the action and the need to deepen the learning, the group was challenged by the implementation of new actions and did not advance in the practical dimension of the work. However, this process led to an immersion of the group in learning new abilities related to self-knowledge, particularly through the systematic place offered to the group for their meetings.</li> <li>- <b>Final stage:</b> The group analyzed the singular role of the nurse manager in the processes of teaching, monitoring, supporting, and being in charge of the efficient performance of procedures and protocols adopted by the organization. In addition, there is the importance of having flexible behaviors to recognize the needs of their collaborators.</li> </ul>	<p><b>Evidence of effects or changes:</b></p> <ul style="list-style-type: none"> <li>- In becoming aware of the reality, the group assumed a defensive and not very collaborative attitude (escape and anguish).</li> <li>- The group concluded that the manager needs to use authority, without authoritarianism, but rather with common sense and assertiveness.</li> <li>- The managers learned that their role involves promoting a favorable environment for work development, ensuring the cooperation, integration, collaboration, and participation of everyone.</li> <li>- The group of managers created a diagnosis about themselves, mapping their strengths and aspects that should be improved.</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>- Continue monitoring the investigated group for its strengthening, especially in terms of learning about trust, collaboration and group work, as well as group cohesion that favors harmony, integration, and interaction, which are essential elements for the consolidation of changes.</li> </ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- During the study period, the group was unable to plan objective actions toward changing their practice.</li> </ul>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Bish, Kenny, Nay / Nursing and Health Sciences / (2013) / Using participatory action research to foster nurse leadership in Australian rural hospitals / Australia</p>	<p><b>Objective:</b> - Identify issues that may have an impact on strategies to foster nurse leadership in rural hospitals.</p> <p><b>Study context:</b> - A participatory action research study conducted with five nursing directors from rural hospitals in Australia. The group was mediated by an action research expert and had a schedule of meetings to address five themes identified by the group as key to improving their leadership performance.</p>	<p><b>Results:</b> - The group identified five key themes, generating indicators for improvements:</p> <p><b>Dispel the myths:</b> - The need for a change in the understanding at the community level regarding the practice of rural nurses and the dissemination of the nurse’s role in health leadership and reform.</p> <p><b>Adopt big-picture thinking:</b> - The need for leaders to seek global and national nursing issues for the daily reality of rural nursing.</p> <p><b>Connect with colleagues:</b> - The need for cohesion among labor relations, both between urban/rural nurses and between other areas of work.</p> <p><b>Reflect on your own conduct:</b> - The need for constant self-knowledge as a key element for the personal and professional development of the leader.</p> <p><b>Create organizational buy-in:</b> - The need to create an organizational network through co-management, support, and formal and informal collaboration for goal achievement.</p>	<p><b>Evidence of effects or changes:</b> - Empowerment of the group of nurses with a broad understanding of the aspects of leadership practice, generating greater knowledge, trust, self-knowledge, awareness, and critical reflection.</p> <p><b>Recommendations:</b> - Strengthen the ability of nurses as leaders and highlight the importance of starting this process during the nursing undergraduate degree. - Understand nursing as an important occupation in rural health reform and the benefits of an active search for improved leadership. - The results of the study encourage the continuity of the development process generated by this study.</p> <p><b>Limitations:</b> - Lack of time for participants to share knowledge with colleagues between meetings.</p>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Mackoff, Glassman, Budin / Journal of Nursing Administration / (2013) / Developing a leadership laboratory for nurse managers based on lived experiences: a participatory action research model for leadership development / United States of America</p>	<p><b>Objective:</b> - Design an innovative model of leadership development, a Leadership Laboratory (LL), grounded in the lived experiences and peer best practices of 43 cross-disciplinary nurse managers.</p> <p><b>Study context:</b> - A one-year participatory action research study was designed to develop three LLs involving 43 nurse managers as participants, co-creators, and evaluators of the project, and as the main beneficiaries of the process results. The Leadership Laboratory was based on four theoretical pillars, which started with an analysis of needs for improvement of the group. Then three-hour sessions were held to address each need highlighted by the group, repeated in four different groups of 10 to 15 nurses.</p>	<p><b>Results:</b> - In the assessment of learning needs in the leadership of the nurse managers three topics of greater relevance were selected:</p> <ul style="list-style-type: none"> <li>• teamwork</li> <li>• time management in light of the mission; and</li> <li>• conflict management</li> </ul> <p>- The three topics defined the format of the Leadership Laboratory (LL) that was conducted as a pilot, and which produced qualitative and quantitative results:</p> <p><b>Qualitative results:</b> - The nurses identified the importance of the LL to enable meetings with peers and receive support and validation of their actions.</p> <p><b>Quantitative results:</b> - More than 35% of the interviewees reported daily or frequent use of strategies from each LL.</p>	<p><b>Evidence of effects or changes:</b> - The meeting with peers provided nurse managers with greater tranquility, knowledge, and confidence in leadership. - The project was assertive in extracting the learning needs from the experience of the nurses.</p> <p><b>Recommendations:</b> - The LLs allow improvements and offer lower cost when compared to other leadership development programs, as they use the prior experiences of the participants to create learning and problem-solving strategies. - Internal educators and/or experienced managers can contribute to training, minimizing the costs of external enablers.</p> <p><b>Limitations:</b> - Challenge in data generalization due to poor adherence in the answers provided to follow-up questionnaires at Month 1 and Year 1.</p>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Taylor, Roberts, Smyth, Tulloch / Journal of Nursing Management / (2015) / Nurse managers' strategies for feeling less drained by their work: an action research and reflection project for developing emotional intelligence / Australia</p>	<p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>- Increase the critical awareness of professionals regarding the practical problems faced by nurse managers</li> <li>- Work systematically together, identifying barriers, for effective nursing management</li> <li>- Improve the effectiveness of the work performed by nurse managers in light of the specific limitations and possibilities of their work</li> </ul> <p><b>Study context:</b></p> <ul style="list-style-type: none"> <li>- Action research with three nurse managers from an Australian rural hospital who worked together. Together they decided to solve problems by promoting awareness of changes in their managerial role. The nurses met every 15 days for one hour; 10 meetings in all were held. The action research cycles were divided into two main phases: planning (meetings 1-8); and action, observation, and reflection (meetings 9-10).</li> </ul>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>- The results were divided into two parts:</li> </ul> <p><b>Part 1: Planning</b></p> <ul style="list-style-type: none"> <li>- The participants identified their value systems, and their potential for moral dissonance with work-related issues/"acting out."</li> <li>- They shared work-related problematic situations, which generated an action plan with five strategies to help them feel less drained due to work intensity:             <ol style="list-style-type: none"> <li>1. Debrief problematic situations with trusted colleagues</li> <li>2. Deflect multiple requests for attention and action</li> <li>3. Diffuse issues with a proper sense of humor during and after problematic situations</li> <li>4. Name dysfunctional behaviors, preferably at the moment when they occur; and</li> <li>5. Regroup, using a "limit time" during and after problematic situations</li> </ol> </li> </ul> <p><b>Part 2: Action, observation, and reflection</b></p> <ul style="list-style-type: none"> <li>- The participants put their plan into action and reflected on its effectiveness.</li> </ul>	<p><b>Evidence of effects or changes:</b></p> <ul style="list-style-type: none"> <li>- The intervention allowed participants not only to share their work experiences and make positive adjustments to their practice but also to keep developing their own emotional intelligence through reflective practice.</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>- The discussion regarding the practice should take place in a private place and with sufficient time to allow the complexity of difficult situations to be described. Time should be allowed for feedback from the group to those who brought up the problem.</li> <li>- The continuous development of emotional intelligence is critical for nurse managers.</li> </ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- Alone, the strategies adopted in the study were not enough to change the way managers felt (drained).</li> </ul>

Authors / Journal / Year / Title / Country	Objective / Context of the Study	Results	Evidence of effects and changes resulting from action research / recommendations / limitations
<p>Sade, Peres / Rev Esc Enferm USP / (2015) / Development of nursing management competencies: guidelines for continuous education services / Brazil</p>	<p><b>Objective:</b> - Develop continuing education guidelines for the development of nursing management skills.</p> <p><b>Study context:</b> - Action research based on Thiollent, conducted with 16 nurses from the Núcleo de Enfermeiros de Educação Permanente do Paraná-NEEP/PR/Brazil. For more than one year, the nurses followed the steps of the action research process, making diagnoses through interviews, discussion seminars, and planning seminars.</p>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>- The study raised relevant aspects in understanding the managerial skills that demand more development. Leadership and continuing education were the most frequently cited aspects.</li> <li>- The challenges for the development of managerial competencies mentioned by the nurses were: dissociation between teaching and service; lack of commitment of nurses; lack of human, physical, and financial resources; and lack of support from higher leadership.</li> <li>- In addition, the study allowed for the collective construction of a guideline as a strategy for the development of nurse competencies through seminars, proposing a modeling system.</li> </ul>	<p><b>Evidence of effects or changes:</b></p> <ul style="list-style-type: none"> <li>- The collective construction of the guideline intensified a sense of belonging to the group and appreciation of the NEEP/PR as a place for discussion and critical reflection on knowledge construction.</li> <li>- The action research promoted a reflection on the reality of the managerial work process of the nurses, broadening the perspective of the members of this center.</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>- It is possible to develop the managerial competencies of nurses from the perspective of continuing education, but it is necessary to understand these competencies beyond the individual, contextualized in real situations of the nursing practice.</li> </ul> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- The time dedicated to the research did not allow the guideline application required for the production of theoretical and practical knowledge related to the implementation of a permanent education program.</li> </ul>

## DISCUSSION

The studies were conducted in different countries, with an emphasis on those developed in Brazil (three studies) and Australia (two), in addition to Canada, the United States, and Germany. Between 2010 and 2015, six of a total of eight papers were produced; the oldest paper was published in 2009. The *Journal of Nursing Management* (two papers) and *Revista da Escola de Enfermagem da USP* (two papers) published half of the papers. The study context was mainly the hospital environment: two studies were conducted in university hospitals; two in rural hospitals; two in medical centers; and one in a state permanent education center.

A review of nursing leadership development programs<sup>(15)</sup> found that more than 60% of the programs focused on nursing in hospital environments and no study addressed nursing in primary care settings<sup>(15)</sup>. These findings are somewhat similar to the results of our study. Although nursing leadership experts indicate the strategic importance of developing leadership skills in nursing<sup>(16)</sup>, concrete actions in this sense seem to be limited to hospital contexts. This result shows that further studies should be conducted to promote an impact on nursing practice in terms of empowerment of nurses with greater leadership skills because this professional is expressly found at all levels of health care and management.

The objectives proposed in the papers show different ways to promote nurse leadership. One study was based on a broader proposal of organizational restructuring, including the nursing team as a critical part of the change process and the inclusion of new work tools<sup>(17)</sup>. Most of the studies analyzed had the aim of enabling the development of nurse leadership based on nurses' obstacles and challenges or improving their performance<sup>(18-20)</sup>. The other papers created leadership development matrices that can be reproduced and guide permanent education processes<sup>(21-24)</sup>.

Regarding the methodological reference to conduct action research, Kurt Lewin and Michel Thiollent's concepts are more frequently observed. The design of all of the studies was based on interventions that used collaborative processes to solve practical problems, involving a cycle of reflection, action, and evaluation which, during their development, promoted personal and/or institutional changes. The duration of the studies also varied; the longest lasted three years, and the shortest three months.

Although the creation of the action research process is attributed to Kurt Lewin<sup>(10)</sup>, over the years other thinkers have improved the idea of conducting a study based on issues found in practice, more specifically related to how to improve the performance of groups that have a task in common. Although the planning/reflection-action-evaluation cycle is a constant element in this process, the actions may be different in each phase and limited to the study context and the objectives and goals that are intended to promote changes at different levels, either locally or in a more complex social group as a whole<sup>(10)</sup>.

In general, the results of the analyzed papers show the designs of the stages conducted in an action research process, highlighting the diagnosis of the situation/reflection or the planning phase as the moment of collective discussions, collective understanding and identification of the determining factors, obstacles, needs, and values related to the practice of nursing leadership. Some of these studies and determining

factors are especially related to conflict management<sup>(18,20,23)</sup>.

In the action phase, the results of the studies indicate the production of the group based on the needs and aspects raised in the previous phase. The studies included in the research show that nurses were involved in the proposals and created new work tools<sup>(17)</sup>, produced projects and action plans<sup>(18,20)</sup>, ensured a new direction to in-service training<sup>(21)</sup>, and became aware of the aspects to be improved and new needs<sup>(21-24)</sup>. In this phase, independence, self-knowledge, initiative, strengthening of participants as a group, and increased power of negotiation through collective empowerment were attitudes identified as favorable to better leadership performance by nurses<sup>(17-20,22-23)</sup>.

The analysis of the evaluation-reflection-action cycle of each paper showed that it is possible to create several ways to “measure” the impact of actions or proposals of work improvement, by creating implementation indicators for new work processes<sup>(17-19)</sup>, new collective evaluation processes<sup>(17,20,24)</sup>, a complexity/competency flowchart of expected actions for leadership<sup>(21)</sup>, and the definition of the profile and roles to be developed when practicing leadership in nursing<sup>(19,22,24)</sup>. It should be noted that, due to the interactive and participative nature of the method, a greater impact of results and effects related to the subjective dimension of collective work is common. In the summary table, the column describing observed effects/changes shows, for all papers, an aspect related to this dimension of the work.

These effects and changes described in the papers included in the research indicate impacts on leadership nurses<sup>(17-24)</sup> and on changes in work teams<sup>(17,20,22)</sup>. Studies have shown that nurses experienced a process of self-reflection and self-criticism that generated empowerment and identification in the leadership role<sup>(18-19,21,23-24)</sup>. From the moment nurses became aware of themselves (self-knowledge) and of their actions, it was possible to project what they had to be, joining knowledge and trust into a “new identity”<sup>(19-20,24)</sup>.

Regarding the teams, the papers indicate changes and effects on the sense of belonging to the teams<sup>(22)</sup>. The evidence includes a redefinition of common goals<sup>(17,20)</sup> and an emergence of new feelings: pride and enthusiasm for being part of the team<sup>(20)</sup>; professional responsibility for institutional projects<sup>(17)</sup>; and a feeling of autonomy and independence<sup>(20)</sup>.

In the organizational context, one of the papers published in Germany addresses a planned organizational change project, in which the nursing team was essential in the implementation of a new work process, performing the most important role in a more complex organizational change<sup>(17)</sup>. This paper shows the potential reach of action research beyond subjective results, although these were also the basis of the most complex change, with impact across the organization.

An organizational change project is an action research model proposed by Kurt Lewin in the mid-20th century<sup>(9,25-26)</sup> suitable for the organizational context, in which changes are organized in three stages: unfreeze; change; and refreeze. In the unfreeze stage, an internal imbalance or crisis causes changes in perception and introduces new ideas, feelings, attitudes, and behaviors. In this stage, people need to be encouraged to leave their current status quo, and believe that there is a need for change and an interest in it. The change will only occur for significant reasons. In this sense, unfreeze happens through questioning;

and new information that causes surprises, doubts, and dissatisfaction that lead to mobilization and awareness of problems and the need for change<sup>(25-26)</sup>. Refreeze is compared to the evaluation phase, where one can envisage the impact that can be measured by behavioral changes and objective indicators of procedural changes proposed in the research. In the paper in question<sup>(17)</sup>, the changes came not only in the implementation of a computerized control of surgical material across the hospital but also in a change in the behavior of nurses, who started to manage this process by their own request.

The design and method of the studies included in this review were carefully described for easy observation that a strict application of the method can lead to a more objective and viable result, showing effects and changes in practice. This result is possible after a careful application of the inclusion criteria of the papers, and the methodological rigor in conducting the research is the most important aspect<sup>(10)</sup>. For this reason, the study participants were forced to reflect on their practices, identify problems, and consider possible changes, starting by recognizing the obstacles to such change and using self-knowledge as the driving force of this process.

Regarding the concept of leadership used as the basis when conducting the studies, the basics of transformational leadership<sup>(27-28)</sup> were the foundation of all papers. This reference assumes that leadership development tools should be based on a collaborative relationship between the team members and between the teams and their leaders, whose purpose is to trigger changes in the context in question, promoting teamwork and shared decision-making for the benefit of the organization.

The conceptual basis of transformational leadership considers the situation involved, the organization's culture, the values of the leader and of his or her staff, the work, the environment, the leader's influence, and the complexity of situations<sup>(7,27)</sup>. This dynamic, procedural, and systemic character of transformational leadership seems to have an interesting connection with the assumptions related to action research, as it considers that, to project certain changes in the perspective of the leadership process, the participants in the process should be able to contribute, "sharing the dream" and leading the organization toward the future, in a collective movement<sup>(7,26-27)</sup>.

From this perspective, leadership development requires improvements in the leader, expansion of self-knowledge, focus on the development of all employees, and transformation of the organizational culture, so that everyone involved can change their own behavior<sup>(27)</sup>.

The recommendations resulting from the studies regarding improvement in the practice indicate that institutional characteristics are taken into account; and that organizations support and value the leadership development process in nursing. Also recommended is a prior study of conflicts and situations experienced by the participants, in order to contextualize the objective and ensure that it makes sense for the study participants. The need to monitor the results was also cited in this type of research, which may generate other collective work improvement processes.

Action research, due to its nature of active participation, was favorable for the development of leadership skills among nurses, and it favored change processes. On the other hand, the evidence indicates

that, for greater success, institutional involvement/support is essential for possible changes or implementation of new processes to be supported by the organization.

Finally, most studies mention the inability to generalize studies of this nature, which is somewhat understandable, because it is about individuals and specific contexts of investigation/action.

## CONCLUSION

This review intended to seek evidence of the effects/changes produced in studies on the development of nursing leadership that used action research as a method. Understanding the scope of this methodology in the production of changes in nursing practice and identifying its results is fundamental to improve its use, and control the investigative process more rigorously to increase the chances that, in fact, the study will have an impact.

In particular, regarding the topic of nursing leadership, it is important to improve not only the nursing practice, but also investigative processes, and to develop more effective leadership models in order to generate more robust evidence.

The impact of this research on nursing practice was that all of the studies confirmed that the method can produce changes in nurse management practices, even if only in the reflexive dimension. Three out of a total of eight studies presented results that changed the service dynamics and behavioral changes in managerial practices. The other five studies consider this dimension as the most important or significant in the study development. The evidence presented by the studies does not seem to end with the study's conclusion because, according to the methodology itself, the processes started with an action research are cyclical, and the reflection started with the intervention continues in the practical application of the resulting knowledge.

The most relevant effects/changes presented in the studies are the empowerment of the participants with information that particularly widened their self-knowledge as a tool to improve the manager's performance, showing that it is a methodology that can be efficiently applied to this dimension. Results such as improved autonomy, job satisfaction, empowerment, and collective critical reflection show impact and transformation in the contexts where the studies were conducted, reinforcing the strategic importance of the development of nurse leadership skills, not only as a demand for research, but to promote impact on nursing practice.

In studies of this nature, in which the subjectivity of the participants is considered, the real need for change should be recognized by those involved. Only after that can the process lead to changes. In the studies analyzed in this review, the desire to change the practice and the contexts is very clear, and the participants commit themselves to implement the intervention and advance to produce supporting tools.

The limitations most commonly indicated by the authors were related to the short time to conduct some studies, implying a more in-depth reflection of the participants. In addition, the fact that the studies were conducted in specific sectors rather than in the organization as a whole seemed to reduce the impact

on the relationships between leaders and their staff, because they did not become part of the organizational culture as a whole.

The gaps identified in this review refer to the lack of results that have an impact on the training of new generations of leaders. Training for leader succession should be considered strategic by nurses, both as an element of the qualification and development cycle of leaders in the area, and to maintain and expand the achievements of this profession. Also evident is the need for nurses to apply leadership models that are more efficient and appropriate to the world today, such as transformational leadership, due to the impact that it particularly has on the mobilization and development of new leadership.

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