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Context as a Facilitator of the Implementation of Evidence-based Nursing: A Meta-synthesis

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Abstract

Nurses have numerous difficulties in implementing science due to obstacles related to the work context. The aim is to explore the work-context-related facilitators of the application of evidence in clinical practice by nursing professionals. Qualitative meta-synthesis of primary studies on nurses' experiences of work-context-related facilitators, as defined by the Promoting Action on Research Implementation in Health Services model. Using the Qualitative Appraisal and Review Instrument of the Joanna Briggs Institute. Of the total 57 primary research articles included, an explanatory model of the facilitating factors related to the work context was generated on the basis of four general categories: institutional support (leadership), multidisciplinary support (teamwork and communication), culture of improving quality of care (nursing professionals' attitudes towards change) and use of research (valuing research). Action can be taken on the facilitating factors of the evidence-based practice application in nursing clinical environments, providing resources and motivation from the organization.

Keywords

evidence-based practice, facilitation, implementation science, models, nursing, workplace

The study of the implementation of evidence into clinical practice is of great importance due to the repercussion it has on the quality of care and, as a consequence, on the health of the population. The interconnection of all these elements shapes the current health care landscape, which makes it essential to use the available resources in the most logical and efficient way possible (American Nursing Association, 2015; Bonfill, 2000; Melnyk et al., 2011; Straus et al., 2018).

Nurses face numerous challenges in implementing new scientific knowledge derived from research results in their clinical settings. They encounter obstacles relating to the professionals themselves, the social and organizational context, and the resources available. For this reason, several models have been designed to guide this the implementation of evidence into clinical practice (Bondmass, 2011; Sánchez-García et al., 2013; Young, 2011).

Among the most studied models of evidence implementation in practice are the Promoting Action on Research Implementation in Health Services (PARiHS) model, according to which an effective implementation of evidence-based practices depends on three dimensions: the nature of the evidence, context, and facilitation (Kitson et al. 2008); the Joanna Briggs Institute model, which encourages decision-making based on as much evidence as possible, while taking into account qualitative knowledge results (Pearson et al., 2005); and many other models that guide evidence-based clinical practice: the Academic Center for Evidence-Based Practice Star Model, the Stetler model, the Iowa model, the Advancing Research and Clinical practice through close Collaboration model, the Caledonian model, the synthesis model of Greenhalgh et al., and the Johns Hopkins Nursing model (Doody & Doody, 2011; Melnyk, 2012; Reavy & Tavernier, 2008; Romp & Kiehl, 2009; Tolson et al., 2008; Stevens, 2013; Young, 2011).

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The PARiHS model was used as the theoretical framework for the present study, because it allows us to understand and describe the work context as an element in the process of evidence implementation by nursing professionals working in health and social care centers. A tool was created to determine the Context Assessment Index (CAI), with a validated version in Spanish (Gómez et al., 2009) and a validated version in Swedish (Nilsson et al., 2013). As other studies explain, the PARiHS framework may contribute to a better understanding of the factors that are involved in the implementation of scientific evidence in clinical contexts (culture, leadership, and evaluation), in order to establish strategies that facilitate the implementation efforts towards change (Rycroft-Malone, 2004; Ullrich et al., 2014).

The PARiHS model has been designed as a framework to facilitate the implementation of scientific evidence, with context being one of its main pillars (Kitson et al., 2008). Even the strengths and weaknesses of the application of this model have been explored in depth, reinforcing the utility of this model in the development of theory-based research programs (Ullrich et al., 2014). This model has also been used by other authors to carry out qualitative studies that seek to understand retrospective and prospective aspects that could be improved (Hill et al., 2017) to promote the use of evidence in nursing care, indicating that understanding first-hand experiences could improve the application of research and the effectiveness of interventions (Rycroft-Malone et al., 2013).

Evidence-based Nursing takes into account the qualitative perspective, thus providing the possibility of producing knowledge by describing the interpretations of nurses who question each of their actions in their professional practice, who wonder if their current practices are those best supported by current evidence (Ramírez & Paravic, 2011; Rutledge, 2005; Stillwell et al., 2010; Toro, 2003b). The hierarchy of evidence published by the U.S. Agency for Healthcare Research and Quality includes qualitative studies (Galvão et al., 2003). Even the Grading of Recommendations Assessment, Development and Evaluation working group has developed a tool to provide guidance for assessing how much confidence to place in findings from qualitative evidence syntheses, namely, the Confidence in the Evidence from Reviews of Qualitative Research (GRADE CERQual) approach (Lewin, 2017). In addition, meta-synthetic studies are considered to be at the highest level of qualitative research, according to Toro (2003a). As mentioned by several authors (Morse et al., 2001; Sandelowski et al., 2006), nurses should consider the use of meta-syntheses, since they facilitate the synthesis of all the results of similar studies and analyze them qualitatively in order to reach new conclusions about the findings by describing and/or explaining phenomena, thus producing scientific evidence.

It is also of the utmost importance to analyze the nursing professionals' perceptions of the implementation of evidence in different health care settings and in different countries. This field of research makes it possible to understand which factors are involved in each situation and provides a starting point for establishing strategies to facilitate the application of evidence in clinical nursing practice, so that all users may benefit from this aspect of professional excellence.

Some researchers have begun to analyze this study topic from parallel perspectives. For instance, Colvin et al. (2013) identified barriers to and facilitators for implementation by synthesizing qualitative research. On the other hand, Hannes et al. (2012) synthesized available qualitative research on the implementation of evidence in clinical practice, but focusing on the perceptions that professionals in the wider health care community have towards these barriers to implementation of evidence-based practice, not only the perceptions nursing professionals have. Patelarou et al. (2013) conducted a systematic review of the attitudes, knowledge, and perceptions of nurses regarding the implementation of evidence-based practice. However, this review did not cover in-depth knowledge of the experiences of these professionals, which could be achieved from the qualitative paradigm. Another review, conducted by Sandström et al. (2011), focused on leadership as the only aspect of context.

Purpose

The aim of the current study is to explore the nurses' perceptions of the facilitators related to the work context for the application of evidence in clinical practice.

Methods

Design

A qualitative systematic review design was used following the Joanna Briggs Institute meta-aggregative approach to the synthesis of qualitative evidence. The purpose of this approach is to assemble the findings of the primary studies, categorize these findings on the basis of the similarity of their meanings, and aggregate categories to draw a set of more meaningful conclusions. To this end, a critical analysis of each study was carried out using a qualitative methodology (The Joanna Briggs Institute, 2014).

Search Methods

The literature search was carried out in the following resources: bibliographic databases, including PubMed, Medline, CINAHL, Scopus, LILACS, Global Health, CSIC, CUIDEN Plus, ENFISPO, and Cuidatge; publication archives, such as ProQuest, ScienceDirect, DOAJ, PLOS, and BioMed Central Nursing; and evidence centers, such as the Cochrane Library and the Joanna Briggs Institute.

The keywords or descriptors used by each database in its own thesaurus were used. Only the articles containing these keywords or descriptors in their titles and/or abstracts

were included in the analysis. The terms were the following: *Clinical practice guidelines, descriptions, evidence-based, evidence, evidence-based nursing, evidence-based practice, evidence used, experience, experiences, facilitators, health plan implementation, implementation, nurses, nursing, opinions, perceptions, practice, qualitative, qualitative research, qualitative studies* (Online Supplementary Table 1). A reverse reference search was also performed using the bibliographic references of the articles found in the primary search.

In the search, neither the language of publication nor the time frame were defined, which allowed us to find all studies available until January 2019.

Criteria for Inclusion of the Studies

The inclusion criteria for this meta-synthesis are based on the type of participants, the phenomena of interest, and the types of research: studies whose participants are nursing professionals working at the primary and specialist health care levels; studies whose phenomena of interest are the nursing professionals' experiences, beliefs, attitudes, and/or perceptions of the facilitation of the implementation of scientific evidence in clinical practice related to the work context; original research using qualitative methods that includes the study of these experiences of nursing professionals regarding the phenomenon of interest; and qualitative studies have been included using a phenomenological approach, grounded theory, ethnography, and participatory action.

Methodological Quality Assessment

In order to determine whether a particular piece of research was of sufficient quality to be included in this meta-synthesis, we followed the assessment criteria proposed by the Joanna Briggs Institute (2014). The consistency between the research methodology and its various constituent parts was assessed on the basis of 10 criteria, checking for consistency throughout the study process and for the presence of external factors. The entire assessment procedure was carried out with each study with the support of the Qualitative Appraisal and Review Instrument (QARI) software. Critical appraisal was performed by two independent reviewers to determine the eligibility of each study and to ensure methodological validity. Two reviewers then compared the assessments and eventually decided which studies should be included. Disagreement was resolved by discussion, and a third reviewer was available for arbitration.

Data Extraction and Synthesis

A total of 318 abstracts were identified for screening in the present study. Only articles which addressed factors facilitating the application of evidence in clinical practice related to the work context and articles involving only nurses who provide direct patient care were included. Finally, 57 studies were included in the meta-synthesis. See Figure 1.

The meta-aggregative methodological approach proposed by The Joanna Briggs Institute for qualitative meta-synthesis was followed. The results of primary studies were identified and grouped by topics and similarities. The frequency and intensity of each topic was then analyzed to group them into categories. The meta-summary was systematized and recorded using the QARI software. The meta-summary was carried out by two reviewers in order to obtain a shared understanding which would facilitate an effective progression of the synthesis.

Relevant data (i.e., country, number of participants, subject matter, type of study, and methodology) were extracted from the articles. The findings of each of the articles included (themes, metaphors, categories, and sub-categories) were also extracted for analysis. The results were synthesized by identifying and comparing differences and similarities between the different findings. The research team had previously established context-related categories (culture, leadership, and evaluation) on the basis of the PARiHS model, developing a framework type qualitative data analysis (Hsieh & Shannon, 2005). Moreover, new and more specific categories emerged in the process, completing the analysis with a directed content analysis (Smith & Firth, 2011). For the creation of the categories, the meta-aggregative approach was used for each category, assigning the results to these categories and developing new categories from the synthesized conclusions, which resulted in a grouping of qualitative data from primary studies (The Joanna Briggs Institute, 2014; Rycroft-Malone, 2004).

Results

Methodological Quality of the Studies Included

Fifty-seven studies were selected and assessed by two reviewers for methodological quality. Studies that met 7 to 10 of the QARI criteria (Online Supplementary Table 2) were included, in accordance with the relevant phases for the successful completion of a meta-synthesis. Fifty-seven articles exceeded the quality criteria and were therefore included, bringing the total number of nursing professionals participating in the studies to 1,649.

Description of the Studies Included

The studies had been published between 1999 and 2019, all in high- and middle-income countries: Australia, Canada, China, Denmark, Finland, Iran, the Netherlands, Norway, Spain, Sweden, the United Kingdom, and the United States. Most of the studies took place in hospitals and in urban settings (primary care and nursing homes).

The participants were mainly women experienced in the field of nursing and directly involved in the planned evidence implementation. Their work contexts encompassed

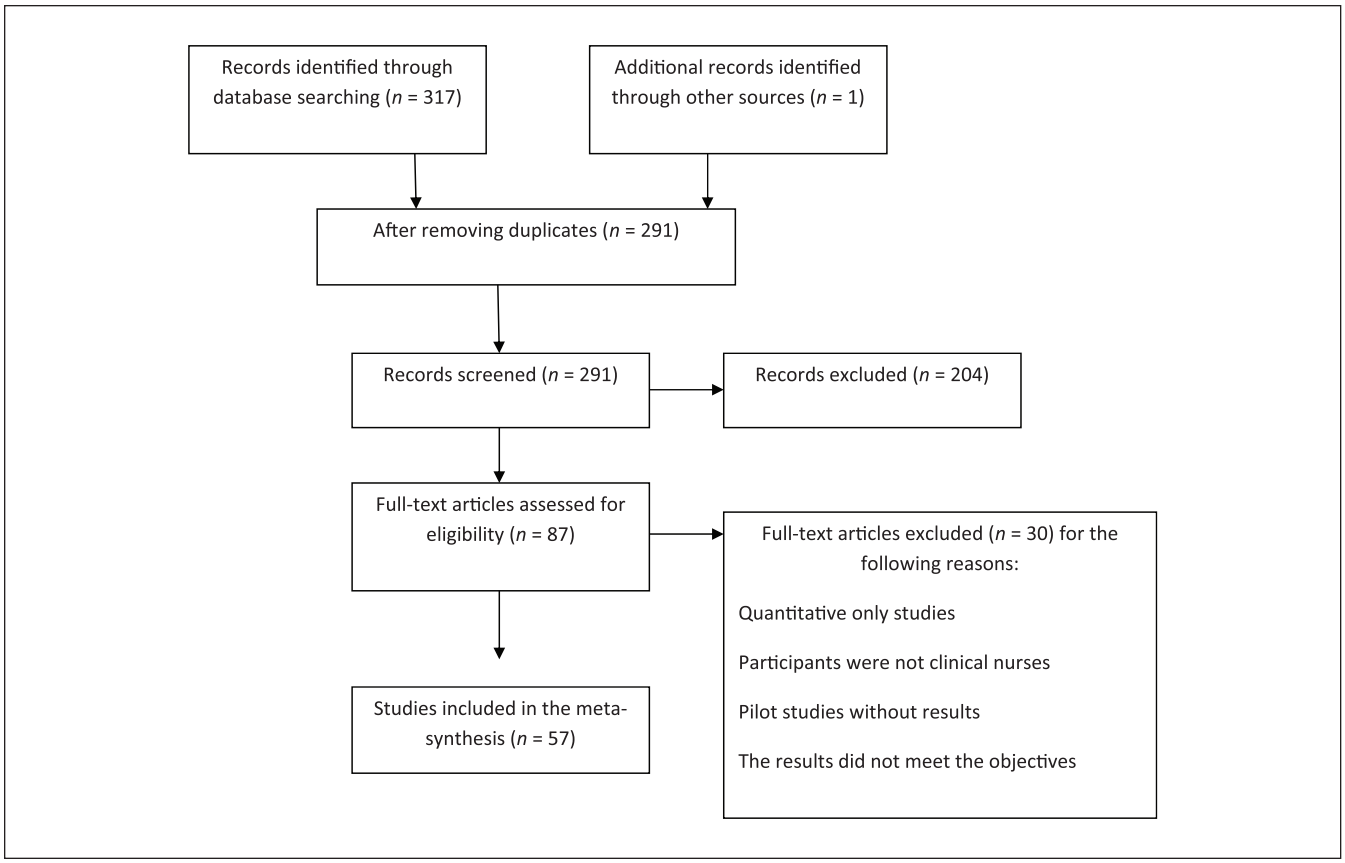

Figure 1. Flow chart of the search and screening process.

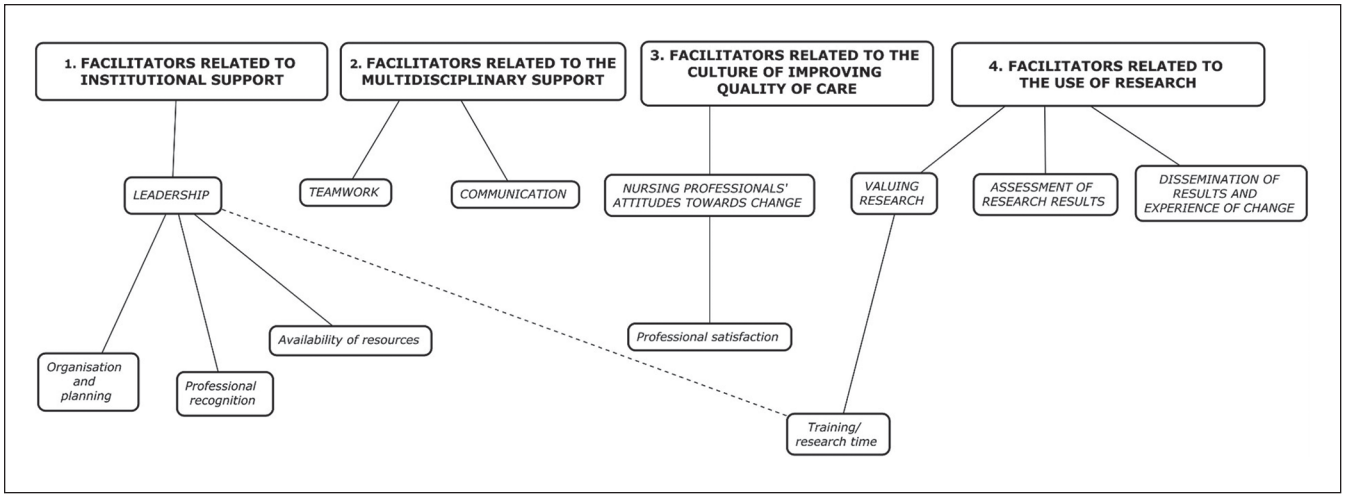

Figure 2. Concept map of the categories and subcategories of the 4 meta-syntheses.

different specialties, such as emergency departments, intensive care units, haemodialysis, and orthopedic centers.

In some cases, the studies focused on implementing evidence-based practice across the board (Adams, 2001; Adib-Hajbaghery, 2007; Chapman & Combs, 2005; Gifford et al., 2018; Sánchez-García, 2014); while other studies (Bjartmarz et al., 2017; Johnson et al., 2018; Kirk et al., 2016; Kolltveit et al., 2017; Santo & Choquette, 2013; Varaei et al., 2013) aimed at the following: the effective use of specific care guidelines; evidence-based clinical practice guidelines, protocols, and programs; health promotion and prevention activities (Brown et al., 1999; Geense et al., 2013; McAlearney & Hefner,

2014; Sving et al., 2017); as well as nursing models (Martin et al., 2007; Vikström et al., 2015). Online Supplementary Table 2 provides an overview of the primary articles.

The main facilitating factors related to the work context, perceived by nurses to incorporate evidence into their everyday practice, were grouped into four general meta-syntheses: facilitators related to institutional support, facilitators related to multidisciplinary support, facilitators related to the culture of improving quality of care, and facilitators related to the use of research. Each of these categories includes other subcategories that add more depth to the descriptions and meanings described by the participants in the primary studies. See Figure 2.

Meta-synthesis 1: Facilitators Related to Institutional Support

Nursing professionals explained that, in order to increase their participation in the implementation of evidence-based practices, they needed the support of their work context at the institutional level. Individuals in positions from executive director to nurse manager were identified as key facilitators for successful evidence application.

Leadership. For nurses, it was essential to have someone on the front line (supervisor/nurse manager/researcher) formally committed, who would lead them through the process and monitor them constantly (Chapman & Combs, 2005; Clignet et al., 2017; Johnston et al., 2016; Kolltveit et al., 2017; Roberts et al., 2016; Sanders et al., 2010). Leadership was identified as the organizational support that provides resources, for example, staff, as well as policy guidelines for each department, while actively participating in the implementation processes. Another way in which leaders served as motivational players was by using back-up, audits, training, and coaching; that is, feedback (Gifford et al., 2018; Ploeg et al., 2007). Nurses were delighted to be able to participate in research processes as long as there was a leader and as long as management itself took on research implementation work as a priority (Kirk et al., 2016).

Nurses pointed out that constant reminders, quality records, training, encouragement, and rewards from management positions were crucial in promoting active participation in the application of research as a clinical improvement and, as a consequence, in motivating multidisciplinary support. The fact that nurse managers checked and rewarded the appropriate practices ensured professional motivation to follow the guidelines, thus contributing to participation in the ongoing research (Clignet et al., 2017; Simpson et al., 2007; Sving et al., 2017).

Organization and planning. For the development of their implementation skills, it was relevant for participants to feel supported in their workplace by directors, coordinators, and administrators (Adams, 2001; Martin et al., 2007) while using a formal process, normalizing practice through standardized protocols or clinical guidelines, and reaching agreements with their team to take their preferences into account (Brolliar et al., 2016; Irwin et al., 2013).

Nurses explained that planning was strengthened by setting short deadlines for the implementation of guidelines, which also helped them become better attuned to these new ways of working (Irwin et al., 2013). They stated that focusing on one area of improvement at any given time, assigning them specific tasks, was a good implementation strategy (Burton et al., 2009).

The availability of easy-to-understand, well-structured, concise recommendations made it easier for them to follow up on their tasks (Bjartmarz et al., 2017; Clignet et al., 2017; Johnston et al., 2016; Martin et al., 2007; Raña-Lama et al., 2016; Roberts et al., 2016).

Professional recognition. Nursing professionals felt that they were being recognized in the development of their new role by being supported in the process of changing practice, which they considered important for their professional development, thus increasing the credibility of the nursing discipline (Gifford et al., 2018; Sánchez-García, 2014). They were satisfied with the application of evidence in their regular practice and were therefore assigned new tasks and responsibilities (Gifford et al., 2011). They also thought they could be encouraged by the creation of incentives that would be assessed through performance reports (Cole et al., 2015).

Availability of resources. Nursing professionals described the importance of managers providing staff resources, external expert support, and equipment necessary for the successful implementation of guidelines through public funding (Jones et al., 2007; Ploeg et al., 2007; Raña-Lama et al., 2016; Sving et al., 2017).

They conferred additional value on the availability of support libraries for finding evidence, and mentioned the need for having appropriate rooms and computer equipment, as well as homogeneous protocols, guidelines, and checklists (Brolliar et al., 2016; Chapman & Combs, 2005; Johnson et al., 2018; Kolltveit et al., 2017).

Other resources the nurses found helpful were international collaboration, staff familiarity with research tools, and previous experiences that could guide peers (Cole et al., 2015; Gifford et al., 2018; Helmle et al., 2018; Malik et al., 2016).

Meta-synthesis 2: Facilitators Related to Multidisciplinary Support

Teamwork. The nurses explained that, united by enthusiasm, they were able to work strategically, and the changes could be effected even without the support of the administration.

Teamwork was identified as an effective facilitator for sustaining communication and the role they played. Teamwork offered them the opportunity to discuss multi-disciplinary

knowledge, thereby broadening the nursing intervention context and increasing their interest (Allen et al., 2018; Burton et al., 2009; Gifford et al., 2006; Johnston et al., 2016).

They stressed the importance of working together as a team, even though each had a unique role in supporting practice. Specialist nurses and doctors were seen as a source of help. Nurses stated that it would be easier to adhere to the guidelines if the doctor learned them first and then supported nurses in their daily work (Gifford et al., 2011).

Some participants felt that holding compulsory multidisciplinary meetings from time to time encouraged team collaboration, and they considered it necessary that the supervisor attended (Hägglund & Olai, 2017; Moreno-Poyato et al., 2019). Coordination with other centers or clinical services also helped them to exchange information which was useful for guideline implementation (Raña-Lama et al., 2016).

Communication. Participants expressed that the experience that guided them in the process of implementing change was open and respectful communication (Brolliar et al., 2016; Irwin et al., 2013; Kirk et al., 2016) with which the members of the team may reach an agreement in order to achieve successful implementation (Kolltveit et al., 2017; Martin et al., 2007). As a result, they also stated that they should incorporate this type of communication in their daily work through discussions in formal and informal meetings, trying to solve through dialogue any problem that may arise (Clignet et al., 2017; Jones et al., 2007; Sving et al., 2017).

Multidisciplinary communication helped them understand the guidelines and communicate them better (Zadvinskis et al., 2018).

Nursing professionals believed it was crucial to deal with any conflicts that might exist in the work context for the sake of genuine and effective communication (Dogherty et al., 2013).

Meta-synthesis 3: Facilitators Related to the Culture of Improving Quality of Care

They considered a patient-centered culture focused on clinical improvement, providing support and opportunities for growth, to be an important facilitating factor (Moreno-Poyato et al., 2019; Raña-Lama et al., 2016; Sánchez-García, 2014).

Nursing professionals' attitudes towards change. Positive staff attitudes and their intention to collaborate in the use of clinical practice guidelines emerged as facilitators. Nurses highlighted health promotion activities and felt confident in their ability to promote them through discipline and focusing on work (Alageel et al., 2018; Clignet et al., 2017; Cole et al., 2015; Johnson et al., 2018; Malik et al., 2016; Stacey et al., 2006). As a result, staff characteristics influenced the culture of collaboration; when nurses viewed skills and responsibilities as a challenge, the positive impact towards change became more likely. Nurses attached importance to the support they themselves provided in health care practice, and they were concerned about quality of care and adapting to new changes (Simpson et al., 2007; Zadvinskis et al., 2018).

Professional satisfaction. They viewed their own professional satisfaction as a point of optimism and achievement in favor of implementation (Alageel et al., 2018; Sánchez-García, 2014). Many of the participants recognized the benefits of the new programs they were implementing (Cole et al., 2015). They were thankful for receiving thorough information updates, which were important for reducing errors in clinical practice and simplified their workflow; they also valued feedback on their performance through reminders from management (Zadvinskis et al., 2018).

Meta-synthesis 4: Facilitators Related to the Use of Research

Valuing research. Participants observed that, if the centers' policies were committed to valuing research, the care culture of nurses might change towards the application of research results (B. Stevens et al., 2011). They noted that participating in research events contributed to the adoption of best practices (Sánchez-García, 2014; Stacey et al., 2006). To this end, they considered it necessary to understand the meaning and significance of the tools they were going to use in order to disseminate them (Kirk et al., 2016).

They remained enthusiastic because they saw with their own eyes the benefits that the patients obtained due to the implementation of evidence-based actions, which made it necessary to discuss the need to stress the importance of evidence (Kolltveit et al., 2017; Malik et al., 2016).

Training/research time. The fact that the workplace offered them the opportunity to attend training events and allowed them to develop the necessary skills for applying evidence was perceived by them as an important facilitating factor as well as a leadership-related aspect (Adams, 2001; Cole et al., 2015; Kolltveit et al., 2017; Malik et al., 2016; Sánchez-García, 2014).

Training and time were the most frequently reported critical factors for success in working on implementation projects. Participants suggested a concise and condensed method of interactive teaching of information that would provide proof of the effectiveness and benefits of scientific evidence (Irwin et al., 2013; Roberts et al., 2016; Sving et al., 2017). They voiced the need for IT-related knowledge and time to devote to it (McAlearney & Hefner, 2014).

Assessment of research results. Participants, by assessing evidence implementation results, ascertained the effectiveness of the guidelines and shared their newly acquired beliefs about

them. As a result, participants stated that they were remarkably useful (Bjartmarz et al., 2017; Dogherty et al., 2013). They explained that assessments should be planned by the team in collaboration with the organization both before and after implementation of evidence (Cole et al., 2015).

Dissemination of results and experiences of change. The dissemination of results was considered a process conducive to the integration of evidence into the culture of the different care units, because it facilitated the exchange of knowledge and skills in this regard, especially for newly recruited nurses. Nurses explained that it was necessary to have access to the results after carrying out the corresponding actions. They also observed that performing tasks properly was a source of dissemination in itself (Happell & Martin, 2004; Roberts et al., 2016). Many of the participants were proud to see the positive outcomes, which motivated them to improve the negative aspects (Sving et al., 2017).

Nurses shared their progress and new beliefs through a cascade of dissemination with their peers, as well as with patients and their families, while keeping feedback going on the degree of implementation of the system, all of which encouraged them to continue implementing changes (Hägglund & Olai, 2017; Matthew-Maich et al., 2013).

Some of the participants noted that the continuity of their care had improved, that they found themselves more productive, and that they were more aware of the application of theory in clinical practice (Moreno-Poyato et al., 2019).

Discussion

The PARiHS model presents the "environment" or context element, where changes occur, as an important facilitator of evidence implementation, with a structure divided into three large blocks showing a plethora of defining characteristics of the "work context" construct in three interrelated spheres: culture, leadership, and measurement/evaluation (Rycroft-Malone, 2004). Other researchers studying the work context have grouped their categories around the previous general categories offered by the PARiHS model, resulting in factors that positively influence the implementation of evidence in nursing practice: leadership, culture, staff training, IT as a support resource, time to assimilate and implement change, mechanisms for interdisciplinary participation, relationships with other organizations, professional development opportunities, reminder systems, feedback audits, training, role models, organization, priorities, and strategic plans (Dogherty et al., 2010; Tucker, 2017)

This meta-synthesis provides detailed information on the emerging facilitating characteristics of each of its conceptual blocks, grouped and related to the original PARiHS model (Kitson et al., 1998; Kitson et al., 2008; Rycroft-Malone, 2004; Stetler et al., 2011). We compared this model and the groupings made by other authors to the groupings that emerged in our study.

After updating and synthesizing the experiences and opinions of nursing professionals, it was found that "culture" coincided with one of the links in the PARiHS framework, which is described by nurses as the training and research time that is part of organizing, learning, and continuing education that the clinical department must offer (Adams, 2001; Cole et al., 2015; Kolltveit et al., 2017; Malik et al., 2016; Sánchez-García, 2014).

The comparison of the PARiHS model's descriptive elements of the work context with the elements of the present study reflects the culture of improving patient-centered care, with nursing professionals embracing values and openness to the changes they seek or have experienced through the application of research evidence, thus favoring an environment conducive to change (Alageel et al., 2018; Moreno-Poyato et al., 2019; Simpson et al., 2007; Stacey et al., 2006).

The fact that the nursing staff and clinical department managers value research, set an example, and are committed to promoting the use of research is viewed as common in this meta-synthesis and other studies on evidence-based practice (Sandström et al., 2011).

Teamwork through appropriate multidisciplinary communication and leadership is also seen as an element that stimulates research (Burton et al., 2009; Hägglund & Olai, 2017; Johnston et al., 2016), creates a positive environment for supporting best practices, and is part of the "leadership" element put forward by PARiHS (Rycroft-Malone, 2004; Stetler et al., 2011). However, in this study, teamwork is seen as a multiaxial multidisciplinary support, which is reflected in the support experienced by nurses from any management rank, from the multidisciplinary team, or among nursing professionals. In addition, being communicative, democratic, and dealing with conflicts leads nurses to attitudes that reflect willingness or openness to change (Clignet et al., 2017; Moreno-Poyato et al., 2019; Sving et al., 2017; Zadvinskis et al., 2018).

For the nurses included in this research, there are rewards, such as availability of resources and funding, professional recognition, training, reduced workload, short deadlines, and easy-to-interpret recommendations, which are the main motivators for carrying out evidence-based practices (Adams, 2001; Cole et al., 2015; Gifford et al., 2018; Gifford et al., 2011; Ploeg et al., 2007; Raña-Lama et al., 2016; Sving et al., 2017). This is all part of the "leadership" block proposed by PARiHS (Rycroft-Malone, 2004; Stetler et al., 2011).

Other studies, though, see knowledge as part of the culture that the work context can offer the worker and compare implementation actions before and after being supported with training (Hill et al., 2017). However, in this review, knowledge transformed into training time is considered by nursing professionals as part of the dedication and attitudes towards the use of research.

Assigning specialized tasks to nurses empowers them and gives them clear roles to perform more specific tasks involving scientific evidence (Burton et al., 2009). This element of

leadership is not described by the PARiHS model. However, it is included in this meta-synthesis as a characteristic voiced by nursing professionals.

Perhaps some factors used by PARiHS as elements of each of its spheres should be further studied and applied to really determine whether these factors serve as clearer and more useful descriptors for the facilitation of evidence-based practice (Rycroft-Malone, 2004). For instance, in this study, support actions or clarified roles within leadership are specified as short deadlines, specialized tasks, and easy-to-interpret recommendations (Bjartmarz et al., 2017; Burton et al., 2009; Clignet et al., 2017; Irwin et al., 2013; Martin et al., 2007), or as a form of communication in decision-making in which conflicts between nursing workers are addressed democratically (Dogherty et al., 2013).

The description of institutional support may be viewed culturally (first element of the PARiHS model) or from the point of view of leadership (second element) (Kitson et al., 2008). Resources and funding are not described as a descriptive element of the work context in the PARiHS model, but as a form of openness to change (Rycroft-Malone, 2004). However, if we had to place them in one of the spheres, they would be associated with management and support within "leadership." (Chapman & Combs, 2005; Jones et al., 2007; Ploeg et al., 2007; Raña-Lama et al., 2016; Sving et al., 2017).

The third large block of the PARiHS model, known as "measurement/evaluation," coincides with the results of this meta-synthesis in that there must be measures to evaluate the transformation of work towards evidence-based practice in nursing professionals by gathering data on results and performance (Rycroft-Malone, 2004; Stetler et al., 2011). Although these factors are not specified in the model, they are specified in the nurses' statements when they describe their experiences and explain the methods for evaluating the implementation of evidence, that is. audits and feedback, the importance of which is also included in the study on the evaluation of the use of the PARiHS framework (Hill et al., 2017). Through the exchange of knowledge and skills, nurses learn guidelines for using evidence in clinical practice. Attending congresses and research events has been a representative internal measure routinely used by nurses in the studies of this meta-synthesis (Kirk et al., 2016; Kolltveit et al., 2017; Malik et al., 2016; Sánchez-García, 2014; Stacey et al., 2006). This measure is the way in which nurses become involved in research and thus participate in the implementation of best practices and assess the use of the latest research evidence, peer review, and multiple sources of information that serve as methods for verifying the reliability and applicability of the evidence to be implemented (Moreno-Poyato et al., 2019; B. Stevens et al., 2011).

Finally, there are methods for evaluating results of evidence implementation, such as performance metrics (clinical and financial), and evaluating explanations (from individuals, teams, and the system; Dogherty et al., 2013; Stevens et al., 2011;). Nurses, once they have experienced the changes, talk about the subject of implementation, the progress made, and its advantages, which leads in turn to the dissemination of these experiences (Hägglund & Olai, 2017; Matthew et al., 2013). This dissemination is also not detailed in the PARiHS model. In this meta-synthesis, dissemination is related to the consistency of the cultural role of the given clinical department. When nurses perform distinct functions and have experienced positive results performing those functions, they share them with their peers and other professionals (Kitson et al., 1998, 2008; Rycroft-Malone, 2004; Stetler et al., 2011).

From the perspective of practical application, the present study will make it possible to benefit from the identification of facilitating factors perceived by nursing professionals by determining how to promote them, by putting into practice the aspects and/or strategies that professionals deem necessary for the implementation of evidence in nursing practice, and by providing better clinical environments and excellent educational frameworks for nurses in training. The facilitating strategies identified may be put into practice in contexts where the perception of obstacles is more intense. Organizations will be able to help nurses implement evidence-based practices by providing resources and encouraging their application in order to deliver good quality health care to users.

By means of their experiences, opinions, and perceptions, nursing professionals show the factors related to the work context that facilitate the implementation of evidence in clinical practice. Leadership should aim for professional recognition by offering incentives, new tasks and responsibilities, and performance reporting. Management must be planned and coordinated, providing standardized guidelines that are easy to interpret, taking into account the preferences of nursing professionals, and assigning them specific tasks and short periods of time to adapt and learn. Nursing staff must be resourced through public funding by recruiting and adjusting qualified staff. They must have rooms with appropriate computer tools available, and they should be led through guidelines and in collaboration with colleagues who are already familiar with the use of research and research guidelines.

Teamwork in the form of compulsory multidisciplinary meetings and coordination with other clinical centers or departments stimulates the exchange of information and experiences that leads to change in clinical practice. It is important that supervisors and medical staff attend meetings, learn guidelines, and support nurses. Communication may be sustained through respectful formal and informal discussions that uphold freedom of opinion. These discussions must be incorporated into the daily routine so that the health team may be able to convey and resolve their problems.

Nurses should participate more actively by being supportive themselves, by being open to responsible collaboration, and by adapting and being involved in the adoption of new

clinically proven alternatives. The result not only brings benefits to users, but also to professionals themselves, by reducing errors in practice, simplifying tasks, and attaining professional satisfaction.

It is important that nurses value the benefits of applying evidence by collaborating in and attending scientific events. The use of research should be facilitated by leaders by offering educational programs for nurses, students, and supervisors. Educational programs are necessary to equip them with knowledge and strategies to acquire positive skills and attitudes towards evidence implementation. Engaging in research prompts nurses to assess and evaluate research, as they are able to verify its effectiveness. As a result, professionals may exchange new knowledge and experiences of change towards excellence in care. To this end, the team has to plan regular pre- and post-evidence implementation evaluations, having intervention outcomes available at all times.

Studies such as the present study are necessary to ensure that the implementation of professional nursing practice based on the best available scientific evidence becomes a reality in our health care context and that all users may benefit from professional excellence. We believe it would be advisable to follow this line of research in order to discover more factors related to and methods for the dissemination of best practices and to learn about them through other models to be able to compare them.

There has been no limitation as to the design, language, or time frame of the primary studies included in this meta-synthesis. On the other hand, there have been limitations regarding the inclusion criteria, since only the experiences of clinical nurses were taken into account, excluding the experiences of nurse managers, who could complement the information obtained. In addition, some of the health care professionals may not have lived the experience first-hand and may not have been involved in the changes, acting only as observers. Years of clinical experience have not been considered as an inclusion criterion. Including professionals with greater clinical experience could have enriched this study with their wider knowledge on evidence implementation and their adaptation processes. Nevertheless, the objective of this study was to analyze the experiences of evidence implementation as perceived by nurses in general. To help understand and agree on a single reality, this study has been triangulated by cross-checking the quality and inclusion criteria of the primary studies using the QARI software developed by the Joanna Briggs Institute and by researcher consensus on a particular cut-off score (seven criteria) for minimum methodological quality.

In addition, other cultures or social classes may not be represented in our findings, either because there are fewer male participants or because the majority of the studies analyzed were conducted in developed countries. However, their data do not suggest that gender, level of education, income, or social status were significant factors. To explore this issue, further studies are needed to analyze possible gender differences, as well as geographical and cultural constraints.

Another limitation could lie in the biases of each primary study, as they accumulate, given the high number of articles included in this meta-synthesis. More participants being involved necessarily results in the management of a greater volume of information, increasing the financial cost of conducting the study. This is compounded by the heterogeneity of the objectives, methods, and methods of implementation used in each article.

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Supplemental Material

Supplemental material for this article is available online.

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* Primary research articles included in this meta-synthesis. All references that have an asterisk (*) refer to the primary studies of this research and they are quoted in the supplementary material table.

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