

Effectiveness of Educational Programs for Clinical Competence in Family Nursing: A Systematic Review

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Abstract

Evidence shows that applying family nursing theory to practice benefits the patient, the family, and nursing professionals, yet the implementation of family nursing in clinical practice settings is inconsistent and limited. One of the contributing factors may be related to insufficient or inadequate educational programs focused on family nursing. This article presents a systematic review of the research that has examined the effectiveness of family nursing educational programs aimed at promoting clinical competence in family nursing. Six databases were systematically searched and 14 studies met the inclusion criteria, generating three themes: general study characteristics, educational program components, and outcome measures. These educational programs reported effectiveness in developing family nursing knowledge, skills, and attitudes, but did not evaluate the nurses' actual acquisition and implementation of family nursing clinical competencies. This review offers relevant implications for research and for family nursing education, especially when designing and evaluating future educational programs. Future research must more closely address the process and outcomes of best educational practices in family nursing education and how these are applied and evaluated in actual practice settings.

Keywords

family nursing, education, systematic literature review, effectiveness, clinical competence

Family nursing education first began in North America in the late 1970s with the introduction of textbooks written to guide the application of family nursing theory in practice settings (Friedman, 1981; Miller & Janosik, 1980; Wright & Leahey, 1984). The Family Nursing Unit at the University of Calgary (Canada; 1982–2007), developed by Dr. Lorraine Wright, focused on the education of master's and doctoral students in advanced family nursing practice, using a live supervision model (Bell, 2008). At the University of Montreal (Canada), Dr. Fabie Duhamel used a similar live supervision model for graduate-level family nursing education (Duhamel et al., 2015) at the Denise Latourelle Family Nursing Unit, later renamed the Center for Excellence in Family Nursing (1993–2015). Family nursing scholars, Dr. Britt-Inger Saveman and Dr. Eva Benzein in Sweden at Kalmar University (now Linnaeus University), also developed the Family Focused Nursing Unit [Omvardnads-mottagning foer familjer] (2004–2010), with an emphasis on family nursing research and education at the graduate level.

Evidence shows that nursing professionals who include family nursing assessment and intervention in their care

benefit not only the patient and the respective family unit but also increase their own sense of nursing competence (Duhamel et al., 2015; Leahey et al., 1995; LeGrow & Rossen, 2005). Family nursing interventions have been shown to improve the physical and mental health of individual patients, disease self-management, symptom control, and the ability to develop healthier behaviors (Chesla, 2010; Gilliss et al., 2019; Rosland & Piette, 2010). Similarly, these interventions may improve the health status of family members and decrease their levels of anxiety and depression (Chesla, 2010; Deek et al., 2016; Foster et al., 2016; Gilliss et al., 2019). Furthermore, the perception of support received from nursing professionals is higher, thereby improving intra-family

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communication patterns and support (Svavarsdottir & Sigurdardottir, 2013; Sveinbjarnardottir et al., 2013). In addition, various reports confirm that offering family nursing interventions has a positive impact on health care professionals, increases their self-esteem and job satisfaction, and therefore improves the quality of nursing care (Duhamel et al., 2015; Leahey et al., 1995; LeGrow & Rossen, 2005; Simpson et al., 2006).

Accordingly, the International Family Nursing Association (IFNA) recently developed the IFNA Position Statements on Generalist and Advanced Practice Competencies for Family Nursing (IFNA, 2015, 2017). These competencies focus on practice guidelines for care for families and for individuals within families.

Nevertheless, the implementation of a family care approach remains inconsistent in clinical practice (Duhamel, 2010; Duhamel et al., 2015; Hanson, 2005; LeGrow & Rossen, 2005), and an individual perspective of patient-centered care and a focus on pathology continues to persist in nursing practice (Canga et al., 2011; Duhamel, 2010). This context highlights the challenges of implementing family nursing in health care settings and the difficulties in translating family nursing knowledge into clinical practice (Bell, 2010, 2014; Duhamel, 2017; Leahey & Svavarsdottir, 2009; Moules et al., 2012).

A possible contributing factor for this gap between theory and clinical practice may be a deficiency in the education of professionals to achieve competence in family nursing (Chesla & Stannard, 1997; Duhamel, 2010, 2017; Duhamel et al., 2015; Wright & Leahey, 2013). Indeed, a large number of nurses recognize the need for more education in family nursing (Duhamel et al., 2015; Ekstedt et al., 2014; Talbot et al., 2000). This demand is also supported by the IFNA (2015) Position Statement on Generalist Competencies for Family Nursing Practice, which upholds the importance of teaching theoretical knowledge and skills based on practice and evidence in family nursing educational programs, which are then developed clinically through supervised practice experiences (IFNA, 2013, 2017, 2018).

Competency-based education is complex, requiring the integration of knowledge, skills, and attitudes for competent and effective clinical performance (Cowan et al., 2007; Duhamel et al., 2015; Meiers et al., 2018; Wright & Leahey, 2013). More specifically, such competency-based education should include theoretical frameworks that provide a knowledge base and guidelines in family nursing practice (Duhamel, 2017; Wright & Leahey, 2013). Similarly, the acquisition of clinical skills is an essential element of family nursing competency (Wright, 1994). Wright and Leahey (2013) differentiated three types of family nursing skills: (a) *perceptual*, referring to the nurse's ability to make relevant observations about the family; (b) *conceptual*, referring to the nurse's ability to give meaning to and make sense of their observations; and (c) *executive*, referring to observable therapeutic family nursing interventions that the nurse offers

the family within interviews/therapeutic conversations. Accordingly, educational programs should promote a nursing professional's positive attitude toward involving the family in the care process, which is essential for ensuring that high-quality care is provided (Sveinbjarnardottir et al., 2011; Wright & Leahey, 2013).

An evidence-based analysis of the family nursing educational programs developed to date, at the international level, could be highly informative, given the importance of education for the development of family nursing clinical competence (Bell, 2010) and its possible relationship with the inconsistent implementation of family nursing in clinical practice. To the best of our knowledge, no systematic review has been performed for this purpose.

Therefore, we aimed to conduct a systematic review to examine the effectiveness of family nursing educational programs aimed at promoting clinical competence in family nursing.

Objective

To identify, evaluate, and summarize the available evidence on educational programs in family nursing and to analyze their effectiveness in developing competency in family nursing.

Method

A systematic review of research articles focused on the effectiveness of family nursing educational programs was carried out using the criteria developed by the Joanna Briggs Institute (JBI; Tufanaru et al., 2017).

Inclusion and Exclusion Criteria

Inclusion criteria. The following inclusion criteria were used to select the articles: (a) Population: licensed nurses, regardless of health care context, specialization, or level of qualification; (b) Objective/Intervention: to study the effectiveness of family nursing educational programs in achieving competence in family nursing; and (c) Design: randomized controlled trials (RCTs), non-RCTs, and quasi-experimental, pretest–posttest, and cross-sectional studies.

Exclusion criteria. Studies with qualitative methodology were excluded and, in the case of mixed methodological design, qualitative data were excluded. Regarding the population, studies where the sample consisted of professionals from other disciplines or exclusively involving nursing students were discarded.

Search Strategy

The literature search was performed in March–April 2019. According to the JBI recommendations, the search strategy

Table 1. Kirkpatrick's Four-Level Framework.

Level 1: Reaction	The participant satisfaction measurement of training. The degree to which participants find the program favorable, engaging, and relevant to their jobs
Level 2: Learning	The extent to which participants improve knowledge, increase skills, and/or change attitudes as a result of attending the program
Level 3: Behavior	The extent to which a change in behavior has occurred because the participant attended the educational program (it is commonly referred to as transfer of learning). In other words, the degree to which participants apply what they learned during training when they are back on the job
Level 4: Results	The degree to which targeted outcomes occur as a result of the program

Source. Extracted from D. Kirkpatrick and Kirkpatrick (2006).

was performed in three phases (Aromataris & Riitano, 2014). In the first phase, an initial search was performed in MEDLINE and Cumulative Index to Nursing and Allied Health Literature (CINAHL) to identify index terms and keywords. In the second phase, a comprehensive search was performed in the databases PubMed (see Supplemental Material 1), CINAHL, PsycINFO, Web of Science-Core Collection, and Cochrane Library, applying the following search terms: nurse, educational intervention, family nursing, clinical competence, knowledge, skills, and attitudes. The only limit established was the language of the publication: English, French, Portuguese, Spanish, and Italian. No time limitations were applied to locate as many articles as possible. The articles considered pertinent to achieve the objective of this study were retrieved for a full-text review and were evaluated for inclusion. In the third and final phase, the “snowball” technique was used to locate relevant articles that were not identified in the previous phase.

Methodological Quality Assessment

The methodological quality of the articles was evaluated using three standardized critical appraisal instruments from the Joanna Briggs Institute–Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MASStARI): (a) *JBI Critical Appraisal Checklist for Randomized Controlled Trials*, (b) *JBI Critical Appraisal Checklist for Quasi-Experimental Studies* (Tufanaru et al., 2017), and (c) *JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies* (Moola et al., 2017). This evaluation was performed by two reviewers (T.G.-A. and C.A.-D.), independently, where eight to 13 criteria were scored as “yes,” “no,” “unclear,” or “not applicable.” A total score was calculated by summing the “yes” items, giving each study a score between 0 and the total number of items evaluated in each checklist (i.e., eight, nine, or 13). Studies with a score equal to or lower than half of the items evaluated were considered as having a high level of bias and therefore poor methodological quality. Studies with a medium or high quality had higher scores. Any disagreement between the two reviewers was resolved through discussion. No study was excluded after evaluation; instead, the results were used to make recommendations for improvement.

Data Extraction and Summary

The standardized data extraction tool from the JBI-MASStARI was used for data extraction. The heterogeneity of the studies, regarding the characteristics of the study design and those of the participating populations, precluded a meta-analysis (Delgado, 2010). Therefore, the results are presented descriptively, classifying them into three main themes: (a) general study characteristics, (b) educational program components, and (c) outcome measures, according to Kirkpatrick's four-level framework (D. Kirkpatrick, 1996; D. Kirkpatrick & Kirkpatrick, 2006; see Table 1). To present the effectiveness data, at each of the Kirkpatrick's levels, whenever possible, mean differences between groups were calculated, accompanied by their 95% confidence intervals.

Results

Study Selection

In the initial search, 2,112 studies were identified. After removing duplicates ($n = 99$), the abstracts of 2,013 articles were examined for their potential inclusion in the systematic literature review. Of these articles, 1,884 were considered irrelevant for the purpose of this review. The remaining 129 articles were evaluated by two reviewers (T.G.-A. and N.E.) independently and in full text, after which 115 articles were excluded for the following reasons: (a) the study design did not meet the inclusion criteria ($n = 58$), (b) no educational intervention for developing competency in family nursing had been implemented ($n = 30$) or was poorly described ($n = 2$), (c) no data on the effectiveness of the intervention for developing competency in family nursing were reported ($n = 13$) or they were poorly reported ($n = 4$), (d) the sample consisted of professionals from various fields ($n = 12$) or included only nursing students ($n = 2$), and (e) full-text access was not available ($n = 1$). Some studies met more than one exclusion criterion (see Supplemental Material 2). Furthermore, no relevant article was found using the “snowball” technique. Ultimately, 14 studies were included in this review (see Figure 1).

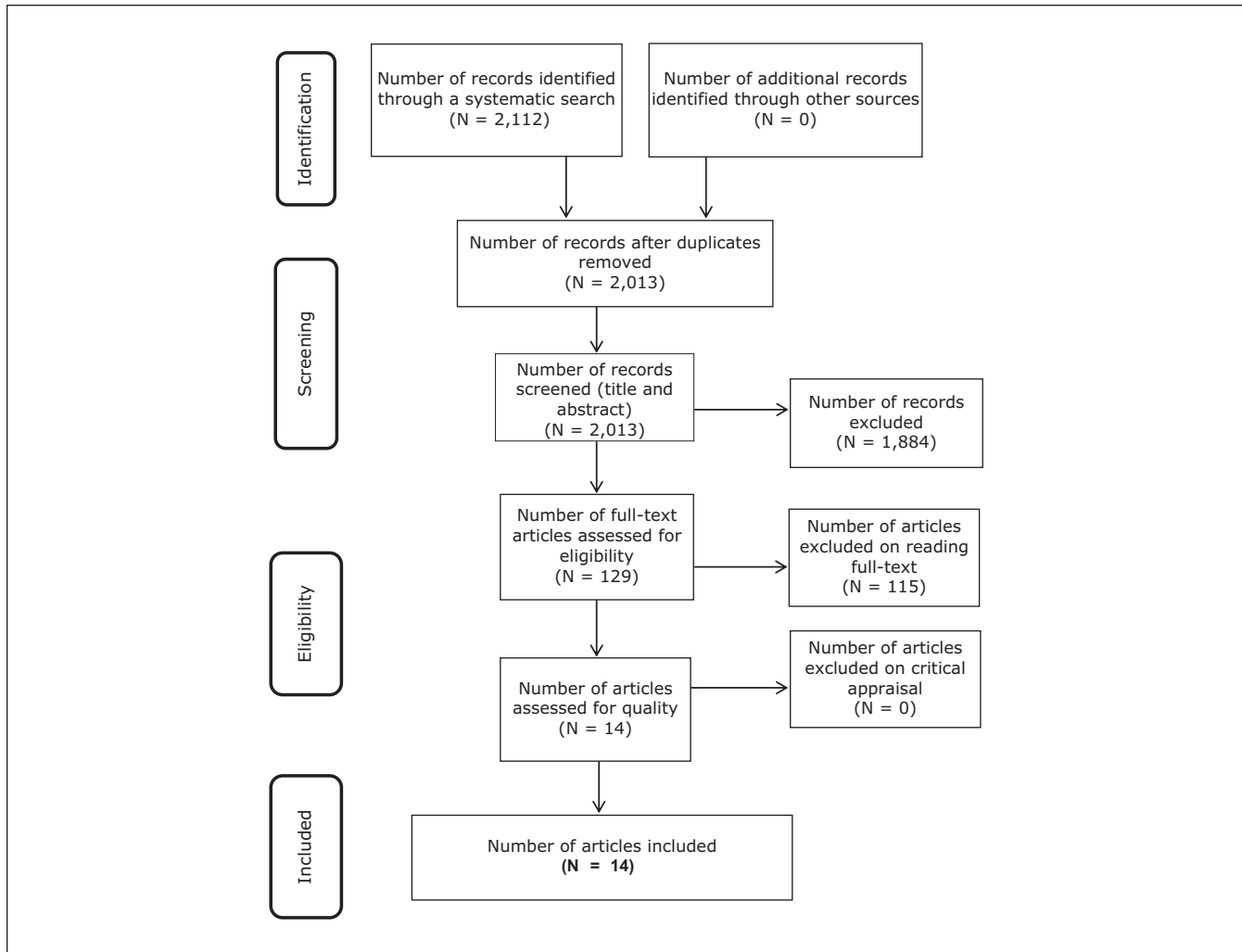


Figure 1. PRISMA flow diagram of search and study selection process.

Source: Moher et al. (2009).

Methodological Quality of the Studies

Table 2 details the methodological quality of the studies. In general, the studies presented medium quality ($n = 11$) and, to a lesser extent, low ($n = 2$) or high ($n = 1$) quality. The most commonly found deficiencies, based on the criteria analyzed for each type of study design, were related to the validity and reliability of outcome measures ($n = 14$); lack of follow-up, description, and analysis of differences between groups in the follow-up ($n = 7$); lack of a control group ($n = 11$); and insufficient description of the statistical analysis used ($n = 12$), among other factors.

Findings of the Review

General study characteristics. Table 3 outlines the main characteristics of the studies. These studies, published from 1993 to 2018, represent a total of seven countries, most frequently Iceland ($n = 5$) and the United States ($n = 4$). In terms of

study design, one was RCT design (Fisher et al., 2014); one was a cross-sectional study design (Svavarsdottir et al., 2018); one was a quasi-experimental two-group time series design (Yamazaki et al., 2017); eight were quasi-experimental one-group pretest–posttest design (Lam et al., 1993; Ma et al., 2018; Milic et al., 2015; Montgomery et al., 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2015; Sveinbjarnardottir et al., 2011; Zaider et al., 2016); one was a quasi-experimental, nonequivalent group before and after design (Blöndal et al., 2014); and two were pretest–posttest mixed-methods design (Broekema et al., 2018; Eggenberger & Sanders, 2016). Furthermore, three of the included studies were pilot studies (Eggenberger & Sanders, 2016; Lam et al., 1993; Montgomery et al., 2016). In 13 studies, the target population were generalist nurses, whereas only one study included advanced practice nurses in their sample (Ma et al., 2018). Most studies were conducted in a hospital setting, and the most frequently included specialties were psychiatry, pediatrics, and intensive care.

Table 2. Critical Appraisal.

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	TS
JBI Critical Appraisal Checklist for Randomized Controlled Trials														
Fisher et al. (2014)	Y	Y	U	U	N	NA	Y	Y	NA	Y	N	Y	Y	7/13
JBI Critical Appraisal Checklist for Quasi-Experimental Studies (non-randomized experimental studies)														
Blöndal et al. (2014)	Y	U	U	N	Y	U	Y	N	U					3/9
Broekema et al. (2018)	Y	Y	Y	N	Y	Y	Y	N	U					6/9
Eggenberger and Sanders (2016)	Y	Y	Y	N	Y	Y	Y	N	U					6/9
Lam et al. (1993)	Y	Y	Y	N	Y	Y	Y	N	U					6/9
Ma et al. (2018)	Y	Y	Y	N	Y	Y	Y	N	U					6/9
Milic et al. (2015)	Y	Y	Y	N	Y	N	Y	N	U					5/9
Montgomery et al. (2016)	Y	Y	Y	N	Y	Y	Y	N	U					6/9
Petursdottir et al. (2019)	Y	Y	Y	N	Y	Y	Y	N	U					6/9
Svavarsdottir et al. (2015)	Y	Y	Y	N	Y	N	Y	N	U					5/9
Sveinbjarnardottir et al. (2011)	Y	Y	Y	N	Y	U	Y	N	U					5/9
Yamazaki et al. (2017)	Y	Y	Y	Y	Y	N	Y	N	U					6/9
Zaider et al. (2016)	U	Y	Y	N	N	N	Y	N	U					3/9
JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies														
Svavarsdottir et al. (2018)	Y	Y	U	Y	Y	Y	N	Y						6/8

Note. The JBI critical appraisal checklist used in each case has been placed in the rows of the table. TS = total score; JBI = Joanna Briggs Institute; Y = yes; U = unclear; N = no; NA = not applicable. In JBI Critical Appraisal Checklist for Randomized Controlled Trials, Q1 = Was true randomization used for assignment of participants to treatment groups? Q2 = Was allocation to treatment groups concealed? Q3 = Were treatment groups similar at the baseline? Q4 = Were participants blind to treatment assignment? Q5 = Were those delivering treatment blind to treatment assignment? Q6 = Were outcomes assessors blind to treatment assignment? Q7 = Were treatment groups treated identically other than the intervention of interest? Q8 = Was follow-up complete, and if not, were differences between groups in terms of their follow-up adequately described and analyzed? Q9 = Were participants analyzed in the groups to which they were randomized? Q10 = Were outcomes measured in the same way for treatment groups? Q11 = Were outcomes measured in a reliable way? Q12 = Was appropriate statistical analysis used? Q13 = Was the trial design appropriate, and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial? In JBI Critical Appraisal Checklist for Quasi-Experimental Studies (non-randomized experimental studies), Q1 = Is it clear in the study what is the “cause” and what is the “effect”? Q2 = Were the participants included in any similar comparisons? Q3 = Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest? Q4 = Was there a control group? Q5 = Were there multiple measurements of the outcome, both pre- and postintervention/exposure? Q6 = Was follow-up complete, and if not, were differences between groups in terms of their follow-up adequately described and analyzed? Q7 = Were the outcomes of participants included in any comparisons measured in the same way? Q8 = Were outcomes measured in a reliable way? Q9 = Was appropriate statistical analysis used? In JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies, Q1 = Were the criteria for inclusion in the sample clearly defined? Q2 = Were the study subjects and the setting described in detail? Q3 = Was the exposure measured in a valid and reliable way? Q4 = Were objective, standard criteria used for measurement of the condition? Q5 = Were confounding factors identified? Q6 = Were strategies to deal with confounding factors stated? Q7 = Were the outcomes measured in a valid and reliable way? Q8 = Was appropriate statistical analysis used?

Educational program components. Table 4 summarizes educational program components. All programs were conducted “face to face.” Regarding the teaching staff, except for two studies (Lam et al., 1993; Ma et al., 2018), all programs included at least one nurse in the team, and six had professionals from other fields (psychologists, social workers, and physicians) (Broekema et al., 2018; Fisher et al., 2014; Lam et al., 1993; Milic et al., 2015; Montgomery et al., 2016; Zaider et al., 2016). Only five programs had at least one educator with education in family nursing (Broekema et al., 2018; Eggenberger & Sanders, 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2018; Sveinbjarnardottir et al., 2011), and in four of these programs, the teaching team consisted of both clinical and academic nurses (Eggenberger & Sanders, 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2015, 2018).

Of the 14 studies included in this review, four did not report having used a specific conceptual framework. The most commonly used conceptual frameworks for the content

of the educational programs were the Calgary Family Assessment Model (CFAM), the Calgary Family Intervention Model (CFIM; $n = 7$; Wright & Leahey, 2013), and the Illness Beliefs Model ($n = 3$; Wright & Bell, 2009).

The content of the programs was heterogeneous and, to a large extent, depended on the frameworks used. The most frequent topics, among others, addressed communication skills, meaning of the illness experience for the family, family nursing theory, nursing roles, family nursing practice skills, family assessment and intervention tools (genogram and eco-map, among others), and the theoretical background of the research findings.

Most studies used several teaching-learning methods, especially lectures ($n = 14$), combined with the following: role-play (simulation) with supervisor or peer-led feedback ($n = 9$), clinical case group discussion ($n = 6$), reflective approach/inquiry ($n = 5$), expert demonstration ($n = 3$), and direct clinical practice ($n = 6$). The programs that included

Table 3. General Study Characteristics.

Study, location	Study design	Sample, setting	Study purpose
Blóndal et al. (2014); Reykjavik, Iceland	Quasi-experimental, nonequivalent group before and after	T1 N = 179; n = 103 RN, n = 76 LPN; T2 N = 131; n = 86 RN, n = 43 LPN; surgical services, university hospital	To examine nurses' attitudes about the importance of the family in surgical hospital units before and after implementation of an FSN educational intervention
Broekema et al. (2018); Groningen, The Netherlands	Pretest–posttest mixed-methods, pilot study	T1 and T2 N = 18; n = 10 home health care nurses, n = 8 hospital nurses	To explore nurses' perspectives about their competencies in FN following a 6-day educational program in FN conversations
Eggenberger and Sanders (2016); Mankato, United States	Pretest–posttest mixed-methods, pilot study	T1 N = 30 RN, T2 N = 14 attended educational intervention; critical care unit, suburban hospital	To examine the influence of an educational intervention on nurses' attitudes toward and confidence in providing family care
Fisher et al. (2014); Oklahoma City, United States	Randomized controlled trial	T1 and T2 N = 35 pediatric nurses; EG = 21, CG = 14; urban adult and pediatric tertiary care hospital	To evaluate the effectiveness of a validated brief communication training (Four Habits Model) session using simulation
Lam et al. (1993); London, England	Quasi-experimental: One-group, pretest–posttest, pilot study	Pilot 1: N = 10; n = 6 charge or community psychiatric nurses, n = 4 staff nurses Pilot 2: N = 12; n = 10 charge or community psychiatric nurses, n = 2 staff nurses	To report the impact on nurses' knowledge, attitudes, and beliefs of two pilot studies conducted to develop a training package for schizophrenia family work
Ma et al. (2018); Hong Kong, China	Quasi-experimental: One-group, pretest–posttest	T1 and T2 N = 24 psychiatric nurses: n = 15 RN, n = 8 advanced nurses, n = 1 ward manager; T3 N = 17; n = 12 RN, n = 4 advanced nurses, n = 1 ward manager; mental hospitals/clinics (group size: 4–5)	To assess the nurses' degree of satisfaction toward the training and the learning outcomes of family therapy training, and the perceived helpfulness of the course for enhancing their professional competence in FN care
Milic et al. (2015); San Francisco, CA United States	Quasi-experimental: One-group, pretest–posttest	T1 N = 82 nurses, T2 N = 80, T3 N = 43; critical care, university medical center (group size: 12–15)	To improve critical care nurses' skills and confidence to engage in discussions with patients' families and physicians about prognosis and goals of care by using a focused educational intervention
Montgomery et al. (2016); Calgary, AB Canada	Quasi-experimental: One-group, pretest–posttest, pilot study	T1 and T2 N = 36 RN; n = 29 BSc, n = 4 diploma, n = 3 LPN; 2 pediatric inpatient units, academic tertiary care center	To evaluate the effects of an educational workshop on nurses' intention to practice FBR using the TPB constructs
Petursdottir et al. (2019); Reykjavik, Iceland	Quasi-experimental: One-group, pretest–posttest	T1 and T2 N = 11 nurses; specialized palliative home care unit, university hospital	To evaluate the impact of an advanced educational and coaching program in an FSN approach
Svavarsdottir et al. (2015); Reykjavik, Iceland (Phase 1)	Quasi-experimental: One-group, pretest–posttest	T1 N = 457 nurses, T2 N = 411; women and children, mental health, surgical, and internal medicine services, university hospital	To report on approaches that were used to assist with implementation of FSN at a university hospital level
Svavarsdottir et al. (2018); Reykjavik, Iceland	Cross-sectional	N = 436; n = 266 BSc, n = 170 graduate; emergency, mental health, women and children, internal medicine and surgical services, university hospital	To evaluate the level of nursing education, having taken a continuing hospital educational course in FSN, and the impact of job characteristics on nurses' perceptions of their FN practice skills
Sveinbjarnardottir et al. (2011); Reykjavik, Iceland	Quasi-experimental: One-group, pretest–posttest	T1 N = 81 RN, T2 N = 52; psychiatric division, university hospital	To assess the change in nurses' attitudes toward families in psychiatric care after having received an education and training intervention program in FSN
Yamazaki et al. (2017); Osaka, Japan	Quasi-experimental two-group, time series	N = 41 nurses; EG = 21 (group size: 5–10), CG = 20; NR	To evaluate the feasibility and short-term impact of case study training in FN care
Zaider et al. (2016); New York, United States	Quasi-experimental: One-group, (retrospective) pretest–posttest	T1 and T2 N = 282 oncology nurses; comprehensive cancer center (group size: 10–12)	To report on the implementation and preliminary evaluation of a new training curriculum for improving skills in RCIF during a patient's hospitalization

Note. T1 = pretest; RN = registered nurse; LPN = licensed practical nurse; T2 = posttest; FSN = Family System Nursing; FN = family nursing; EG = experimental group; CG = control group; T3 = second posttest (follow-up); BSc = bachelor of science; FBR = family-centered bedside rounds; TPB = theory of planned behavior; NR = not reported; RCIF = responding to challenging interactions with families.

Table 4. Educational Program Components.

Study	Educator(s)/FN education (Yes/No)	Theoretical foundations	Content	Teaching-learning methods	Duration, time period
Blöndal et al. (2014)	6 RNs/ NR	CFAM, CFIM	CFAM, CFIM; methods to increase interactions with the family during patients' admission and discharge; importance of a positive approach toward families and their presence	<ul style="list-style-type: none"> Lectures; Workshops + clinical vignettes skills training; 	8 hr; 1 day
Broekema et al. (2018)	RNs/ Yes; 1 Social Worker/ No	CFAM, CFIM	FN foundations; NANDA, NIC, NOC related to FN; CFAM, CFIM; genogram, eco-map; Systems and Communication theory, FN conversations	<ul style="list-style-type: none"> Lectures; Role-play + supervisors' feedback; FN conversation expert demonstration + discussion; Clinical practice: FN conversations + group supervision and reflection with educator; Nurses' presentations: FN practice experiences + group discussion 	NR, 6 days, + Clinical practice: 3 months; (5 months)
Eggenberger and Sanders (2016)	5 nurses/NR; 1 nurse manager/NR; 1 nurse researcher/Yes	CFAM, CFIM; IBM	Nurse and family experiences with critical illness, therapeutic conversation	<ul style="list-style-type: none"> Digital storytelling; Workshop: Nurses' reflections and dialogue about family experiences and interventions + manual provision; Role-play: Nurse-family interactions 	4 hr; NR
Fisher et al. (2014)	NR	Professional development framework; Information processing theory	EG: Four habits communication model CG: Travel-documentary	<ul style="list-style-type: none"> EG: Theory session, simulation, and debriefing CG: Video 	1 hr; 1 day
Lam et al. (1993)	1 psychologist/NR; 1 physician/NR	NR	Skill acquisition to practice	<ul style="list-style-type: none"> Didactic teaching; Role-play: Discussion + experiential learning + weekly group supervision; Work in pairs with at least 2 families 	72 hr; 9 months
Ma et al. (2018)	2 NR/No; 1 Social Worker/No	Family-centered approach	Marriage and family therapy; systemic and strengths-based perspective; family assessment and intervention skills; genogram	<ul style="list-style-type: none"> Lectures + clinical vignettes discussion; Sensitivity training + self-reflexivity; Clinical observation or simulated role-plays + individualized learning goals; Clinical practice + videotape clinical supervision (2 days) 	35 hr + Clinical supervision: 14 hr; (3 months)
Milic et al. (2015)	5 RN/ NR; 1 RN, PhD/ NR; 2 physicians/ NR; 1 psychologist/ NR	NR	Roles and responsibilities of bedside nurses to patient and family; communication skills: Family meeting, nurse-family and nurse-physician conversations	<ul style="list-style-type: none"> Workshop; Didactic session and discussion; Facilitated role-plays; Reflection session; Narrative reflection practice. 	8 hr; 1 day
Montgomery et al. (2016)	1 RN, MN/NR	TPB	Importance of relational practice; value of patient and FCC and FBR; nursing FBR role; skills during FBR	<ul style="list-style-type: none"> Workshop: FCC video + nurses' reactions; FBR literature overview; FBR video demonstration; Small group discussion; Tip sheet provision for FCC communication 	2 hr; 1 day

(continued)

Table 4. (continued)

Study	Educator(s)/FN education (Yes/No)	Theoretical foundations	Content	Teaching-learning methods	Duration, time period
Petursdottir et al. (2019)	1 RN/Yes	CFAM, CFIM; IBM	CFAM, CFIM; FN approach and offering interventions; Theory and evidence base knowledge in FN, relational value of implementing FN practice in palliative home care, FN practical skills.	<ul style="list-style-type: none"> • Customized educational session; • Face-to-face clinical mentoring; • Clinical practice: FN intervention + live clinical supervision; • Coaching; • Clinical meetings + nurses share FN practice experiences • Seminar + lectures; • Family skills lab training + clinical case discussion; • Workshop; • Clinical practice: Application of FSN + clinical supervision (3–5 sessions) • Lectures; • Seminar; • Family skills lab training + clinical cases discussion; • Workshops 	4–6 hr + Clinical practice: Time NR; (NR)
Svavarsdottir et al. (2015; Phase I)	NR	CFAM, CFIM	CFAM, CFIM; short-term FN interventions	<ul style="list-style-type: none"> • Seminar + lectures; • Family skills lab training + clinical case discussion; • Workshop; • Clinical practice: Application of FSN + clinical supervision (3–5 sessions) • Lectures; • Seminar; • Family skills lab training + clinical cases discussion; • Workshops 	8 hr; 1 day + Clinical practice: 1–4 months
Svavarsdottir et al. (2018)	1 nursing professor/yes; Advanced MSc nurses/NR; CNSs/NR	CFAM, CFIM	CFAM, CFIM, FN interventions, therapeutic questioning, family strengths	<ul style="list-style-type: none"> • Seminar + clinical vignettes; • Clinical practice: FSN application; • Supervision (3–5 sessions); Nurses' experiences of applying FSN (cases presentation) • EG: Lectures, exercises, case study presentation and training sessions • CG: Lectures 	NR; NR
Sveinbjarnardóttir et al. (2011)	3 RN, MSc/Yes 2 RN, diploma/NR 4 RN/NR	CFAM, CFIM; IBM	CFAM, CFIM; the 15-min family interview; strengthening nurses' clinical skills in family nursing	<ul style="list-style-type: none"> • Seminar + clinical vignettes; • Clinical practice: FSN application; • Supervision (3–5 sessions); Nurses' experiences of applying FSN (cases presentation) • EG: Lectures, exercises, case study presentation and training sessions • CG: Lectures 	8 hr, 1 day + Clinical practice: 4 months; (14-month)
Yamazaki et al. (2017)	EG: 2 CNSs MSN; 1 CN; 1 RN/NR CG: 1 RN PhD/NR	NR	EG and CG: Definition of family; FN process; basic functions; developmental stages; life cycle; family profile; Family System, family structural functional and family stress theories EG: Case study	<ul style="list-style-type: none"> • Didactic presentation; • Exemplary videos; • Role-play + peer-led feedback; • Reflection; • Workbook provision 	EG: 6 hr; 6 months CG: 3 hr; 1 day
Zaider et al. (2016)	1 Psychologist PhD/NR 1 MPH/NR 1 RN, PhD/NR 1 RN, OCN/NR 1 LCSW/NR	Collaborative, strength-based, family-centered framework	Family distress during hospitalization, collaborative care with families, responding effectively to challenging interactions	<ul style="list-style-type: none"> • Didactic presentation; • Exemplary videos; • Role-play + peer-led feedback; • Reflection; • Workbook provision 	2 hr; 1 day (2-years program)

Note. FN = family nursing; RN = registered nurse; NR = not reported; CFAM = Calgary Family Assessment Model; CFIM = Calgary Family Intervention Model; NANDA = North American Nursing Diagnosis Association; NIC = Nursing Interventions Classification; NOC = Nursing Outcomes Classification; IBM = Illness Beliefs Model; EG = experimental group; CG = control group; MN = master of nursing; TPB = theory of planned behavior; FCC = family-centered care; FBR = family bedside rounds; FSN = Family System Nursing; MSc = master of science; CNS = certified nurse specialist; MSN = master of science in nursing; CN = certified nurse; MPH = master of public health; OCN = oncology certified nurse; LCSW = licensed clinical social worker.

Table 5. Outcome Measures.

Study	Evaluation method(s) characteristics (comparison groups) Data collection times	Main results						Behavior								
		Reaction			Learning			Knowledge			Skills			Attitudes		
		MD	95% CI	p	MD	95% CI	p	MD	95% CI	p	MD	95% CI	p	MD	95% CI	p
Blondal et al. (2014)	FINC-NA: 26-item, 5-point Likert-type scale (T1 vs. T2) T1: Before EI T2: 18 months after EI															
Broekema et al. (2018)	FINC-NA: 26-item, 5-point Likert-type scale (T1 vs. T2) T1: Before EI T2: 3 months after															
Eggenberger and Sanders (2016)	1. ASRQ: 3-item (T2) 2. ASRQ: 10-item, true-false (T1 vs. T2) T1: Before EI T2: After EI (NR)	1. Satisfaction: EI: 92.9% extremely satisfied Information and methods: 80.3% extremely valuable and effective (CG vs. EG; T2)	2. FN, family illness experience: 0.4 [-0.25, 1.05] .313													
Fisher et al. (2014)	PERCS pre- and postquestionnaire (adapted version) (CG vs. EG; T2) T1: Before EI T2: Immediately after EI															
Lam et al. (1993)	1. ASRQ: 40-item true/false, MCQ Pilot 1 and 2: • (T1 vs. T2) • (T2 vs. T3) 2. ASRQ: 13-item, 7-point Pilot 1: • (T1 vs. T2) • (T2 vs. T3) Pilot 2: • (T1 vs. T2) • (T1 vs. T3) • T1: Before EI • T2: After 8 weeks • T3: After 9 months	1. Factual knowledge about schizophrenia and schizophrenia family work: Pilot 1 • -3.2 [-8.87, -1.53] .007 • 0.4 [-3.33, 4.13] .423 Pilot 2 • -3.33 [-6.90, 0.24] .019 • -0.89 [-4.36, 2.58] .235	2. Attitude and assumptions about schizophrenia and schizophrenia family work: Pilot 1 • -6.5 [-13.21, 0.21] .017 • -0.7 [-9.11, 7.71] .408 Pilot 2 • -5.89 [-13.67, 1.89] .080 • -11.11 [-17.78, -4.44] .001													
Ma et al. (2018)	ASRQ: 18-item, 5-point Likert-type scale, 3 subscales: a. (T2), b and c: (T1 vs. T2) (T1 vs. T3) (T2 vs. T3) T1: Before EI T2: Completion of module I T3: Completion of module III	a. Training methods and trainers: Positive feedback for overall satisfaction b. FT Knowledge acquisition and theory understanding: • -0.57 [-0.98, -0.16] .006 • -0.73 [-1.10, -0.36] .006 • -0.16 [-0.47, 0.15] .006	c. Overall performance on FT: • -0.67 [-1.10, -0.24] .001 • -0.82 [-1.25, -0.39] .001 • -0.15 [-0.46, 0.16] .001													
Mille et al. (2015)	ASRQ: 14- to 22-item survey (T1: Before EI T2: After EI T3: 3 months after EI)	Communication with families and physicians about prognosis and goals of care: The percentage of participants reporting an excellent or very good level of skill was higher at T2 and T3 than at T1 (p < .001 for all skills shown)	Communication with families and physicians about prognosis and goals of care: The percentage of participants reporting that they felt "confident" or "very confident" was higher at T2 and at T3 than at T1 (p < .001 for all tasks shown)													

(continued)

direct clinical practice used a variety of supervision methods, that is, Petursdottir et al. (2019) used live supervision, Ma et al. (2018) used videotape supervision, and the others applied process recording supervision or similar methods (Broekema et al., 2018; Lam et al., 1993; Svavarsdottir et al., 2015; Sveinbjarnardottir et al., 2011).

The length of the educational programs varied. The shortest program was 1 hr in length and the longest was 72 hr; 10 of the educational programs lasted less than 10 hr. The time period during which the nurses, within the educational program, conducted interventions in clinical practice ranged from 3 days to 9 months.

Outcome measures of the educational programs. Table 5 outlines the outcome measures of the educational programs. In half of the educational programs studied, effectiveness was evaluated using instruments designed by researchers for the desired purpose (Eggenberger & Sanders, 2016; Fisher et al., 2014; Lam et al., 1993; Ma et al., 2018; Milic et al., 2015; Montgomery et al., 2016; Zaider et al., 2016). In addition, some studies used psychometrically validated instruments, such as the Families' Importance in Nursing Care–Nurses' Attitudes (FINC-NA; Blöndal et al., 2014; Broekema et al., 2018; Svavarsdottir et al., 2018; Sveinbjarnardottir et al., 2011; Yamazaki et al., 2017), the Family Nurse Practice Scale (FNPS; Petursdottir et al., 2019; Svavarsdottir et al., 2018), and the Icelandic Health Care Practitioner Illness Beliefs Questionnaire (ICE-HCP-IBQ; Petursdottir et al., 2019), among others. In all studies, evaluation was self-reported, that is, the respondents read the question and selected a response by themselves without interference.

Regarding the time of data collection, evaluations were performed in one ($n = 1$), two ($n = 9$), or three ($n = 4$) time periods. The time between evaluations ranged between immediate measurements taken after the intervention was delivered and measurements taken after 24 months. Four studies did not report this information.

The results of program effectiveness were organized according to Kirkpatrick's four-level framework (D. Kirkpatrick, 1996; D. Kirkpatrick & Kirkpatrick, 2006).

Level 1: Reaction. Includes the satisfaction of the participants with the educational program. This outcome was evaluated in three studies (Eggenberger & Sanders, 2016; Ma et al., 2018; Zaider et al., 2016). More specifically, the study by Eggenberger and Sanders (2016) showed that the nurses were satisfied with the educational program, especially with the content and teaching methods. In turn, Ma et al. (2018) found that the nurses were satisfied with the program educators, and the study by Zaider et al. (2016) showed that participants valued the skills learned as useful and relevant to the setting.

Level 2: Learning. Includes the extent to which participants improve knowledge, skills, and/or change attitudes as a result of attending the program.

Knowledge. Five studies evaluated the acquisition of knowledge in family nursing (Eggenberger & Sanders, 2016; Lam et al., 1993; Ma et al., 2018; Petursdottir et al., 2019; Svavarsdottir et al., 2018). Three of them assessed the level of knowledge in family nursing practice (Eggenberger & Sanders, 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2018). More specifically, Svavarsdottir et al. (2018) and Petursdottir et al. (2019) assessed the level of knowledge by Practical Appraisal (PA), a subscale of the FNPS, which measures levels of satisfaction, knowledge, confidence, skill, and comfort with families, and Svavarsdottir et al. (2018) showed that graduate nurses who completed the educational and training intervention demonstrated significantly higher knowledge than undergraduate nurses who did not ($M = 4.10$ vs. 3.70 , respectively; $p < .001$). Similarly, Petursdottir et al. (2019) found that, after administering the advanced educational and training intervention, nurses' knowledge increased from an average of 4.11 in the pretest to 4.42 in the posttest ($p = .009$). In contrast, in the study conducted by Eggenberger and Sanders (2016), no significant differences were found after administering the educational program although the authors noted that the results suggested a positive change in knowledge.

In turn, Ma et al. (2018) evaluated the acquisition of knowledge and understanding of the theory used in an educational program of systemically based and strengths-oriented family therapy, which increased significantly from a mean of 2.87 in the pretest to 3.44 in Posttest 1 to 3.60 in Posttest 2 ($p = .006$). Similarly, in the study by Lam et al. (1993), who reported the impact of two pilot studies, factual knowledge about schizophrenia family work significantly increased in both pilot studies at 8 weeks follow-up (Pilot 1, $M = 27.20$ at pretest vs. 32.40 , $p = .007$; Pilot 2, $M = 26.89$ at pretest vs. 30.22 , $p = .019$). However, after a subsequent measurement, at 9 months, no significant differences were found.

Skills. Six studies evaluated the acquisition of practical skills (Fisher et al., 2014; Ma et al., 2018; Milic et al., 2015; Montgomery et al., 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2018). More specifically, Svavarsdottir et al. (2018) and Petursdottir et al. (2019) evaluated the nurses' level of skills for working with the Family System using the PA subscale of the FNPS. Both found significant differences (statistical values reported in the "Knowledge" section).

Communication skills were evaluated in two studies (Fisher et al., 2014; Milic et al., 2015). Fisher et al. (2014) evaluated communication skills in an RCT of the effectiveness of a validated brief communication training (Four Habits Model) session for emotion-focused conversations with parents. In this RCT, after the intervention, nurses who completed the training session showed significantly higher communication skills ($M = 3.96$ vs. 2.93 ; $p < .05$) and relational abilities ($M = 4.10$ vs. 3.50 ; $p < .05$) than those nurses who did not. Similarly, in the study by Milic et al. (2015), the percentage of nurses reporting an excellent or very good

level of skill in communicating with patients' families and physicians about prognosis and care goals was higher at posttest, and 3 months posttest, than at pretest ($p < .001$) for all skills evaluated.

Conversely, Montgomery et al. (2016) observed that the perceived behavioral control over Family-centered Bedside Rounds (FBR; ability to practice the behavior) increased significantly ($M = 94.89$ at pretest vs. 99.18 at posttest; $p = .001$) at 6 weeks of follow-up after the educational program. Similarly, Ma et al. (2018) reported a significant increase, after the intervention, in overall performance on family therapy ($M = 3.09$ at pretest vs. 3.76 at Posttest 1 vs. 3.91 at Posttest 2; $p < .001$), including the confidence level and comfort in working with families, in addition to skills.

Attitudes. Thirteen studies evaluated changes in nurses' attitudes (Blöndal et al., 2014; Broekema et al., 2018; Fisher et al., 2014; Lam et al., 1993; Ma et al., 2018; Milic et al., 2015; Montgomery et al., 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2015, 2018; Sveinbjarnardottir et al., 2011; Yamazaki et al., 2017; Zaider et al., 2016). More specifically, attitudes toward the importance of involving the family in nursing care were evaluated by five studies (Blöndal et al., 2014; Broekema et al., 2018; Svavarsdottir et al., 2015; Sveinbjarnardottir et al., 2011; Yamazaki et al., 2017). However, in only one study (Broekema et al., 2018), the nurses' attitudes increased significantly from a mean of 94.65 to 101.59 , at 5 months posttest ($p < .001$). Similarly, Svavarsdottir et al. (2018) and Petursdottir et al. (2019) evaluated nurses' attitudes toward working with families by FNPS-PA. Both found significant differences (statistical values reported in the "Knowledge" section).

In turn, nurses' attitudes and confidence in relation to communication with the family were evaluated in three studies (Fisher et al., 2014; Milic et al., 2015; Montgomery et al., 2016). More specifically, Fisher et al. (2014) found that the confidence of the nurses who completed the training intervention was significantly higher than those who did not ($M = 3.52$ vs. 2.43 , respectively; $p < .050$). Similarly, in the study by Milic et al. (2015) the percentage of nurses reporting that they felt "confident" or "very confident" to perform key tasks in communication about prognosis and goals of care was higher at posttest, and 3 months posttest, than at pretest ($p < .001$) for all tasks evaluated. Although the nurses' attitudes increased after the educational program in the pilot study by Montgomery et al. (2016), this increase was not significant.

In addition, Zaider et al. (2016) evaluated the perceived confidence in responding to challenging family interactions and reported a significant increase at 6 months of follow-up after the educational program ($M = 3.32$ at pretest vs. 3.96 at posttest; $p < .001$). Ma et al. (2018) also found significant differences in overall performance in family therapy, regarding the confidence level and comfort in working with families, at three evaluation times (statistical values reported in

the "Skills" section). Similarly, Lam et al. (1993) reported the impact of two pilot studies, regarding the attitude and assumptions about schizophrenia family work. In one of these studies, in Pilot 1, a significant increase was observed at 8 weeks of follow-up ($M = 57.30$ at pretest vs. 63.80 at posttest; $p = .017$). However, the difference in means assessed in a subsequent measurement, at 9 months, was not significant. Regarding Pilot 2, significant differences were found only between baseline and Time 2, at 9 months ($M = 61.00$ at pretest vs. 72.11 at posttest; $p = .001$).

Level 3: Behavior. Includes the degree of integration of learning acquired in routine clinical practice, which was evaluated in three studies (Montgomery et al., 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2018). More specifically, Svavarsdottir et al. (2018) and Petursdottir et al. (2019) evaluated the nurse's experiences of interaction and reciprocity in the nurse-family relationship using the subscale Nurse-Family Relationship (NFR) of the FNPS. Hence, Svavarsdottir et al. (2018) observed a significant increase when comparing graduate nurses who completed the educational program with undergraduate nurses who did not ($M = 4.10$ vs. 3.81 , respectively; $p = .010$). Conversely, Petursdottir et al. (2019) found no significant differences after the advanced educational and training intervention.

In turn, Montgomery et al. (2016) evaluated five FBR nursing behaviors. The means of these five behaviors increased between the pretest and the posttest, at 6 weeks of follow-up. However, the only significant difference was found in the subscale "providing education for families about FBR" ($M = 58.49$ at pretest vs. 64.59 at posttest; $p = .001$).

Level 4: Outcomes. Includes the degree to which targeted outcomes occur as a result of the program. No study evaluated this level in the short, medium, or long term.

Discussion

The results from this systematic literature review show the short-term effectiveness of educational programs in developing the knowledge, skills, and attitudes necessary for competent family nursing practice. However, only two of the 14 studies evaluated the long-term effectiveness of educational programs (Milic et al., 2015; Yamazaki et al., 2017). Furthermore, only one of them showed significant differences in the development of skills and attitudes of the participants (Milic et al., 2015).

In general, the lack of detail and clarity in the reporting of methods and outcomes of individual studies stood out. Specifically, some of the major deficiencies found in the studies' reports include, but are not limited to, aspects such as settings and locations, participants, educational program components (i.e., theoretical foundations, the deliverer, exposure quantity and duration, and time span) and outcome measures (i.e., data collection methods, instrument's information).

In fact, none of the studies have followed standardized guidelines for reporting their research, which can make it difficult to understand the outcome variables of educational interventions, as noted by Craig (2018) and Des Jarlais et al. (2004).

Study Designs

Among the studies analyzed in this review, the methodology, study designs, operationalization of the variables, and conceptualization of the different studies were highly heterogeneous, which has prevented the performance of a meta-analysis (Delgado, 2010). In other words, the overall effectiveness of the interventions could not be summarized and analyzed, considering the effect of each intervention on its context.

The analysis of the effectiveness of educational programs is considerably challenging because determining the impact attributable to an intervention is difficult, given the dynamic nature of the clinical practice in which the interventions are performed, the large number of outcome measures, and the presence of confounding variables (Attree, 2006; Hutchinson, 1999). Accordingly, an RCT is recognized as the most reliable design to determine effectiveness (Campbell et al., 2000; Craig, 2018). However, only one study with this type of design has been identified (Fisher et al., 2014), which, together with the study by Yamazaki et al. (2017), were the only studies with a control group. In the other studies, the most commonly used design was the one-group pretest–posttest, specifically in eight studies, which, as indicated by Spurlock (2018), is the most predominant design in educational research in nursing. However, pretest–posttest designs are widely criticized for their susceptibility to numerous threats to internal validity, limiting the establishment of causality, as they do not allow controlling for confounding variables (Attree, 2006; Spurlock, 2018). In addition to the above, most studies had a small sample, with fewer than 100 participants in 10 studies, which precluded significant results. However, small samples are commonly found in educational research because, due to its characteristics, the number of people who can participate in these studies is usually limited (Hutchinson, 1999). Thus, applying the JBI critical appraisal tools for research (Moola et al., 2017; Tufanaru et al., 2017), one study has high quality, 11 studies have medium quality, and two studies have low quality. For this reason, the joint evaluation of methodological aspects of the 14 studies highlights the need for research on all these aspects.

Educational Program Components

The educational programs identified in this review can be considered complex interventions because they had multiple components that interact with each other and different causal pathways (Craig, 2018; Guise et al., 2017). Therefore, when analyzing effectiveness, all components of the intervention must be considered, including factors that may affect the

intervention (Hutchinson, 1999). Accordingly, we can offer some general observations: First, in all programs, family nursing education was administered in person. This may reflect the lack of available evidence of the effectiveness of other innovative methods in health education, which leads educators to often opt for traditional approaches, as indicated by Ferguson and Day (2005). However, Hoehn Anderson and Friedemann (2010) have chosen other instruction methods, such as online learning, and report on different effective teaching-learning strategies for family assessment and intervention.

Second, educational programs based on a theoretical model reported better outcomes, in terms of effectiveness, than those that are not based on any model. This corroborates Wright and Leahey's (2013) assertion regarding the importance of providing a clear framework for family assessment and intervention, which facilitates change from a traditional and individualistic perspective to "thinking family" or "thinking interactionally." The most widely used models, specifically in seven studies, have been the Calgary Family Assessment Model (CFAM) and Calgary Family Intervention Model (CFIM) (Wright & Leahey, 2013).

Third, most educational programs have used various teaching-learning methods: lectures, role-play (simulation), supervisor or peer-led feedback, clinical case group discussion, reflective approach/inquiry, expert demonstration, digital storytelling, and direct clinical practice. As indicated by Wright and Leahey (2013), competence can be acquired through several of these methodologies. However, the individual impact of each method could not be determined in the studies included in this review because the outcomes were analyzed in combination.

Another key aspect regarding the methods is that only six studies included direct clinical practice. In contrast, Wright and Leahey (2013) and Duhamel (2017) argued that clinical application of learning, and the ability to link it to favorable outcomes, is one of the most effective strategies in developing competence in family nursing. In addition, different methods of supervision were used in these six studies. The most widely used were the process recording and case discussion, which, as indicated by Wright and Leahey (2013), are the most frequent methods of supervision in developing family nursing skills. However, live supervision, which consists of a clinical supervisor observing a family interview from behind a one-way mirror or in the room with the supervisee, is regarded as the most effective method for assisting and monitoring family nursing competence (Chesla et al., 1993; Tapp & Wright, 1996; Wright, 1994; Wright & Leahey, 2013) because it is the only method that provides immediate feedback for the development of executive skills (Wright, 1994; Wright & Leahey, 2013). However, this method of supervision was adopted by only one of these six studies (Petursdottir et al., 2019), which was, in fact, the only study that reached Level 3 of Kirkpatrick's four-level framework (D. Kirkpatrick & Kirkpatrick, 2006), that is, the professional's behavior in

clinical practice. Nevertheless, Petursdottir et al. (2019) found no significant differences, which, as they explain, could be due to the fact that the participants had already used a family approach before the intervention.

Finally, only five studies had at least one educator with specific education in family nursing, which may reflect the lack of family nursing educators who have had the opportunity to be educated/supervised as supervisors (Wright, 1994). This fact could explain the lack of live supervision in the educational programs analyzed in this review. This is a relevant finding because several authors indicate that one of the main factors that has contributed to the slow implementation of a family nursing approach in clinical practice is the lack of coaches or mentors who can role model and demonstrate family nursing assessment and intervention, as well as guide and support clinicians in the development of competence in family nursing practice (Duhamel, 2010, 2017; Duhamel et al., 2015).

Outcome Measures

Assessing the effectiveness of educational programs for competency in family nursing practice, and their impact at the organizational level, requires valid and reliable measures (Attree, 2006; Hutchinson, 1999). However, half of the studies identified in this review used measurement instruments developed by the authors themselves, with limited information regarding the instruments' psychometric properties, which calls into question the validity of the outcomes. This may reflect the limited availability of valid and reliable family nursing practice measurement tools, especially when measuring behavioral changes in clinical practice (Level 3 of the Kirkpatrick's framework; Bell, 2011; Sawin, 2016; Van Gelderen et al., 2016). The scarcity of these types of measures is a recurring and widespread problem in health education research (Attree, 2006; Hutchinson, 1999; Watson et al., 2002; Wilkes & Bligh, 1999).

All of the tools used were self-reports. However, several literature reviews have recognized the weaknesses of this method of evaluation of clinical competence (Colthart et al., 2008; Gordon, 1991; Kevin & Glenn, 2005) due to numerous threats to the validity and reliability of this rating, which is subject to response biases (Gordon, 1991; Spurlock, 2017). A pioneering contribution to bridging the gap of the self-report measures is the study of the international psychometric validation of the Van Gelderen Family Care Rubric (VGFCR), conducted by Van Gelderen et al. (2019), who demonstrated that the VGFCR is a valid and reliable tool that allows educators to evaluate learners' performance and competency in family nursing practice and provide consistent feedback.

Similarly, the studies with some type of supervision within their educational program have not reported evaluations by supervisors either. This is particularly relevant because supervision of family nursing skill development is considered the most effective method for monitoring and

developing competence (Tapp & Wright, 1996; Wright, 1994; Wright & Leahey, 2013).

Levels of Evaluation

Kirkpatrick's four-level framework (D. Kirkpatrick, 1996; D. Kirkpatrick & Kirkpatrick, 2006) provides a frame of reference for the analysis and presentation of the outcomes of the different educational programs, within categories/levels (Frye & Hemmer, 2012), making it possible to identify the attributes necessary for competent family nursing performance. Accordingly, this review may be used as a guide in the design of future educational programs.

According to the Kirkpatrick's framework (D. Kirkpatrick & Kirkpatrick, 2006), most studies, 11 to be precise, present Level 1 or 2 outcomes, that is, *reaction*, regarding the participant's satisfaction with the program, and *learning*, regarding the extent to which participants improve knowledge, increase skill, and/or change attitudes as a result of attending the program. However, regarding Level 3, *behavior*, there is little evidence because only three studies have evaluated the degree of integration of learning into clinical practice (Montgomery et al., 2016; Petursdottir et al., 2019; Svavarsdottir et al., 2018). In addition, no interventions that have assessed Level 4 were identified, that is, *results*, regarding the degree to which targeted outcomes occur as a result of the program, indicating a serious lack of evidence in this regard. These findings, according to Attree (2006) and D. Kirkpatrick and Kirkpatrick (2006), are recurrent in health education research because, in general, effectiveness is not evaluated at Levels 3 and 4 of the Kirkpatrick's framework. This is a key limitation of the study of the effectiveness of educational programs in developing competence in family nursing as Levels 1 and 2 of the Kirkpatrick's framework do not predict, by themselves, the capacity for family nursing performance in clinical practice (Chesla, 2010; Cook, 2010; D. Kirkpatrick & Kirkpatrick, 2006).

Accordingly, J. D. Kirkpatrick and Kirkpatrick (2016) indicated that Level 3 is precisely the missing link needed to move from learning (Level 2) to results (Level 4). For J. D. Kirkpatrick and Kirkpatrick (2016), Level 3 is more than just evaluating; it is a comprehensive, continuous performance monitoring and improvement system. This perspective is in line with other authors who highlight the importance and need to develop and evaluate processes and systems for the translation of learning into clinical practice (Bell, 2014; Duhamel, 2010, 2017; Graham & Tetroe, 2010; Wilkes & Bligh, 1999). However, of the three aforementioned studies that have evaluated Level 3, only Petursdottir et al. (2019) described processes and systems for learning implementation in clinical practice, albeit lacking key elements, such as implementation times, performance monitoring, and the time between evaluations. In other words, the family nursing educational programs analyzed in this report clearly show a lack of development and evaluation at this level. This is a relevant

finding because it explains why family nursing has not yet been systematically and continuously implemented in clinical practice (Bell, 2014; Duhamel, 2017).

Review Limitations

Currently, no fully developed method for finding, reviewing, and combining data from complex intervention studies is available (Craig, 2018; Guise et al., 2017), which has hindered the systematic learning process. However, the JBI data identification, extraction, and quality assessment systems for systematic literature reviews of effectiveness have been rigorously followed and described (Tufanaru et al., 2017).

Although a robust protocol with a replicable search strategy based on JBI recommendations (Tufanaru et al., 2017) has been followed, not all relevant studies may have been retrieved and included in this review. On one hand, the research heterogeneity found in this review regarding the study design, the characteristics of the participating populations, and the components of the intervention may indicate the representativeness of the types of educational programs in family nursing. On the other hand, this heterogeneity has prevented us from conducting a meta-analysis, which has limited the generalizability of the results (Delgado, 2010). Finally, the use of only quantitative study designs excludes approaches to learning research that incorporate qualitative methodology and analysis.

Implications for Research and Education

First, the quality of reporting in studies is generally poor, with apparent deficiencies. Therefore, to improve the description and comparison of interventions in future studies, available checklists, such as Criteria for Reporting the Development and Evaluation of Complex Interventions in health care (CReDECI 2; Möhler et al., 2015) or Template for Intervention Description and Replication (TIDieR; Hoffmann et al., 2014), should be used routinely.

Second, the challenges of attribution (because these complex interventions are developed in the dynamic environment of clinical practice with a high number of outcome measures and confounding variables) require moving toward the use of more rigorous (experimental/quasi-experimental) designs, such as those using randomization and control groups, conducting long-term, large-scale studies, and collaborating with other health care organizations to increase sample size (Attree, 2006; Ferguson & Day, 2005; Spurlock, 2018; Wilkes & Bligh, 1999). This approach could help to identify the most appropriate combination of teaching-learning methods for the development and acquisition of competence in family nursing.

Third, the lack of direct clinical practice, detected in most educational programs, highlights the need to include this teaching-learning method in future educational programs

(Duhamel, 2017; Wright & Leahey, 2013). Similarly, this practice should include supervision by educators, if possible, by live or videotape supervision (Tapp & Wright, 1996; Wright, 1994; Wright & Leahey, 2013) and guided by the evidence about deliberate practice (Bell, 2018).

In addition, the shortage of educators with specific education in family nursing highlights the need to educate leaders in family nursing practice and supervision, who can role model and demonstrate family nursing interventions as well as guide and support clinicians in their development (Duhamel, 2010, 2017; LeGrow & Rossen, 2005).

Fourth, valid and reliable measurement instruments must be developed, especially for assessing the acquisition of family nursing competence in clinical practice (Attree, 2006; Hutchinson, 1999; Watson et al., 2002; Wilkes & Bligh, 1999). Accordingly, direct evaluation methods, which have been demonstrated to have higher validity, such as direct observation, considered to be the most complete form of competence evaluation (Colthart et al., 2008; Gordon, 1991; Kevin & Glenn, 2005; Sawin, 2016; Spurlock, 2017), should be used, using the self-report method only as a complement to the other methods.

Finally, generally, the lack of evaluation detected in studies on the behavior of the professional in clinical practice, precludes assessing whether the professional is competent in family nursing practice and, consequently, whether the educational program has been effective. This caveat highlights the need to include higher evaluation levels in future studies to determine the degree of integration of learning in clinical practice (Kirkpatrick's Level 3) and, ultimately, the degree to which targeted outcomes occur as a result of the program (Kirkpatrick's Level 4). In addition, the lack of information reported in studies on processes of learning implementation in clinical practice reflects existing deficiencies in implementation, which highlights the need to develop and evaluate strategies that facilitate such implementation (Bell, 2014; Duhamel, 2010, 2017). Accordingly, implementation processes and systems should be considered when planning future studies that determine and evaluate competency in family nursing practice.

Conclusion

This is the first systematic review of the literature on the effectiveness of educational programs in family nursing. The results of this study expand the knowledge of what is known about family nursing education to date and offer a solid synthesis of the characteristics of the educational programs found in the literature so far. In addition, this review provides clear guidance on the strategies and methods to be incorporated in the design, implementation, and evaluation of educational programs, so that they are effective in the development of clinical competence in family nursing.

Most educational programs are focused on increasing the knowledge, skills, and attitudes for family nursing practice. Yet, despite the fact that family nursing is a clinical competence, the programs usually do not aim at integrating learning into practice and lack of strategies for evaluating competence. Similarly, professional practice evaluations are not performed either, which precludes assessing whether educational programs are effective for the acquisition of competencies in family nursing.

In conclusion, more research is needed to overcome this lack of evidence and to address the implications identified in the review. In the future, educational programs should move toward the use of teaching methods for effectively assisting and monitoring the clinical competence of the nursing professional in family nursing. For example, direct clinical practice with live or videotape supervision would consistently evaluate the professional's practice in family nursing. Similarly, programs should include implementation systems in planning. Furthermore, the need to advance toward the use of rigorous designs with randomization and control groups and conduct long-term studies with a larger sample size, using systematically valid and reliable evaluation instruments, is highlighted. All these strategies will help to develop a body of knowledge based on research to move toward best educational practices for competency in family nursing, that is, evidence-based family nursing education.

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Supplemental Material

Supplemental material for this article is available online.

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