Nurses' attitudes, perception and knowledge of family-centred care

Review

Nurses' attitudes, perception and knowledge of family-centred care

Abstract

Family-centred care (FCC) is an approach to healthcare that occurs within varied paediatric care settings with the belief that this model of care meets the psychosocial, emotional, and physical needs of the hospitalised child and family. This review aimed to explore the attitudes, perceptions, knowledge and implementation of FCC from many studies and to facilitate a wider and more thorough understanding of this practice from a diverse sample of nurses working in paediatric care settings.

Method The review was completed using the Joanna Briggs Institute (JBI) Systematic Review Method. Seven databases (MEDLINE, EMBASE, CINAHL, JBI, ProQuest, PsycINFO, and Cochrane Library) were searched for research associated with FCC in paediatric care settings published between January 2013 and May 2024.

Aim To identify, appraise, and synthesise extant literature on the prevalence and practices to enhance family-centred care among nurses working in paediatric care settings, as this can help to evaluate their existing state of awareness, experience, and training.

Results Of the 644 potentially relevant studies identified, and following title and abstract screening according to the inclusion criteria, 55 papers were selected for retrieval. Of these, 16 met the inclusion criteria. Quality assessment was completed using the MMAT appraisal tool.

Conclusion FCC in pediatric care settings is significant as it can benefit children to be supported by their families when they are admitted to a care setting. Nevertheless, nurses require the right attitudes, perception and knowledge regarding FCC concepts and principles, which can enhance the efficacy of practicing FCC.

Keywords attitude, perception, knowledge, nurses, family centred care, pediatric care

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Background

Family-centred care (FCC) has been globally embraced as a 'philosophy of care' for paediatric nursing.[1] The foundation of FCC is the partnership between patients, their families, doctors, nurses, and other specialists for clinical care and scheduling, provision, and assessment of healthcare.

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Additionally, FCC is based on research and the training of healthcare professionals.[2] The following core concepts guide these cooperative partnerships:

- Respect and dignity
- Honouring differences
- Sharing of information
- Participation and collaboration
- Negotiation
- Care in the family and community context[3,4]

FCC provides a framework for paediatric nurses to assume the objective and responsibility to care for infants and children through approaches that foster and stimulate not only physical well-being but also the beneficial psychological and emotional development that takes place in the family context.[5,6] Existing research reveals that the provision of FCC is often impacted by the knowledge of nurses to practice.[7,8,9] Moreover, it has been demonstrated that collaboration, the development of trustworthy relationships, and effective communication are integral aspects of healthcare delivery and essential in shaping parents' positive experiences and meeting their child's best interests during hospitalisation. Tailoring communication and interaction styles by the child's age, maturity, illness severity, and emotional, cognitive, and

physical developmental levels are vital in the development of effective parent and child outcomes.[10]

FCC is a collaborative approach between the family and healthcare providers in planning and executing care for children in paediatric care settings.[11] The family is constant in any child's life and distancing them during illness can be harmful to both the child and family.[3,12] Involving family in the care of children during hospitalisation can enhance parental satisfaction and bring positive impacts during follow-up care.[2] Nurses play a vital role in paediatric care and their knowledge to practice FCC is very important as they are the people closely connected to the family members of the children in healthcare settings.

FCC has a long history of debate and discussion in paediatric care and more recently has been referred to as child and family centred care.[13,14,15] This emphasis recognises the voice of the child and young person in relation to their own care which was promoted by Article 12 of the United Nations Convention on the Rights of the Child where the views of children in relation to all matters affecting them need to be recognised and considered.[16] Despite this recent conceptual shift, for the purposes of this review, FCC was used and articles referring to child and family centred care were also included if they met the inclusion criteria.

Aim and research questions

Despite the long history of FCC's application in paediatric care, it is often not implemented effectively leading to the conclusion that further empirical support is necessary to investigate whether nurse-related facets, such as their knowledge of, attitudes to, and perceptions of FCC practices, could impact their provision of FCC to the patients under their care. This systematic review focuses on nurses' knowledge, attitude, and perceptions of FCC in the context of paediatric hospitals. The following research questions underpinned the review:

1. What is the attitude (feelings and beliefs) of nurses toward FCC in paediatric hospital settings?

2. What is the extent of knowledge (information and skills) of nurses regarding FCC in paediatric hospital settings?

3. What are the perceptions (interpretation and understanding) of nurses regarding FCC in paediatric hospital settings?

Methods

A systematic review using the Joanna Briggs Institute (JBI) Systematic Review Method was conducted.[17] The review used the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines.[18] The primary outcome of the review was defined as nurses' attitudes, perceptions and knowledge of FCC in the context of pediatric hospital care.

Search Strategy

In May 2023 a comprehensive and systematic search was conducted, using seven electronic databases: The Cumulative Index to Nursing and Allied Health Literature (CINAHL); Joanna Briggs Institute (JBI) Library of Systemic Reviews; Cochrane Library; EMBASE; MEDLINE; ProQuest; and ScienceDirect). Identified Medical Subject Headings (MeSH) and keywords in the first search included family-centred care, practices, knowledge, attitude, perception, nursing, and paediatrics. The search was limited to studies published from 2013 to 2024. The initial search was completed in 2023 and thus a ten year time period was selected to identify contemporary articles on the topic of focus. An experienced librarian and the research team collaborated to identify relevant search terms and refine the search strategy. An additional search was performed on Google Scholar using the same search terms to ensure that coverage was sufficient and effectual[19]. Finally, reference lists of eligible articles were hand-searched[20,21] to identify other articles that could be relevant. The search was repeated in May 2024 to ensure that new or missing articles were not overlooked.

Inclusion criteria

Original, peer-reviewed full-text articles were selected for review according to the following eligibility criteria:

- Primary research studies of quantitative, qualitative or mixed method design that evaluated the attitudes, perceptions and knowledge of nurses on FCC
- Studies that included nursing professionals, that is registered nurses working in paediatric hospital settings
- Published in English between January 2013 and May 2023.
- The primary outcome of nurses' attitudes, perceptions, or knowledge of FCC is measured using a validated or author-defined assessment tool.

Exclusion criteria

- We excluded studies that did not measure the primary outcome of nurses' attitudes, perceptions or knowledge of FCC in the context of paediatric hospital care.
- Previous reviews and meta-syntheses were also excluded; however, their reference lists were checked for possible suitable articles for inclusion.

Search terms used across the databases were as follows:

(nurs* OR nursing* OR nurses* OR "child health nurse*" OR "paediatric nurse" *)

AND ("family-centred care" OR FCC* OR "family nursing" OR "child health nursing" *)

AND (practices* OR knowledge* OR awareness* OR attitude* OR perception*)

Process of data collection

All retrieved records were uploaded into Covidence for screening. Following the removal of duplicates, title, and abstract screening for the full search yield was undertaken independently by two authors (SD, VK). Full texts of studies deemed potentially eligible by one or both reviewers were read independently by two authors (SD, VK) and summarised in discussion to identify eligibility, with a third author (EF) adjudicating in cases of disagreement, and discussions continued until consensus was reached on the final set of papers for inclusion. For the data abstraction flow chart see figure 1.

Quality assessment

The Mixed Methods Appraisal Tool (MMAT)[22] was used to evaluate the quality of the included studies. MMAT was also used to generate the quality score for each included study. For quantitative (QUAN) and qualitative (QUAL) studies, the score was computed by dividing the number of criteria met by four. The scores can vary from 25% (one criterion satisfied) to 100% (all criteria satisfied). On the other hand, for mixed method (MM) studies, the assumption was that the study's total quality could not exceed that of its weakest element. Consequently, the overall quality score was determined to be 25% when only one qualitative criterion or one quantitative criterion or no mixed method criterion components of the study were met (QUAL=1 or QUAN=1 or MM=0); the score was 50% when two qualitative criteria or one quantitative criterion or one mixed method criterion were satisfied (QUAL=2 or QUAN=2 or MM=1); it was 75% when three qualitative criteria or three quantitative criteria or two mixed method criteria are satisfied (QUAL=3 or QUAN=3 or MM=2); and 100% when all the criteria were satisfied (QUAL=4 and QUAN=4 and MM=3).[23]

In the current review, the studies were categorised as weak (≤0.50), moderate-weak (0.51 to 0.65), moderate-strong (0.66 to 0.79), or strong (≥0.80) (Table1). This rating system has been used in other systematic reviews[24] and is based on a method of scoring created by de Vet.[25] In the present review, four of the seven quantitative studies[25,26,27,28] and three of the qualitative studies[30,31,14] were assessed to be of strong quality. Only one study[32] was categorised as meeting less than 50% of the quality criteria.

Data extraction and synthesis

Data extracted included author/s, year, country, study design, sample, setting, methods, and data collected. This review was undertaken using a convergent synthesis design[33], whereby quantitative, qualitative, and mixed method data were analysed separately and then results were combined. The data extraction tables were reviewed and discussed by all the authors. Subsequently, the decision was made to narratively synthesise the data due to the differences in sample size, setting, and study designs, utilised in the included articles.

Results

As mentioned previously, this systematic review aimed to identify and synthesise published literature regarding nurses' knowledge, attitude, and perceptions of FCC in the context of paediatric hospital settings.

Characteristics of the included studies

A detailed description of the included studies is provided in Table 2. Overall, seven studies were quantitative, five were qualitative and four were mixed-method design. Most of the studies (n=6) were conducted in Asian countries. The remainder were conducted in Africa (n=3), USA (n=3), Europe (n=2), Australia (n=1) and New Zealand (n=1). The studies were mostly from 2023, 2021 and 2017 (three studies each), followed by 2020 (two studies). The remaining studies were published in 2013, 2015, 2016, 2018, and 2022 (one study from each year). All studies (n=16) were specifically conducted among nurses working in paediatric care in hospital settings. Sample sizes ranged from 20 to 444 nurses in the quantitative studies, eight to 88 nurses in the qualitative studies, and 132 to 258 in the mixed methods studies. Two studies used a pre-/post-test/intervention design.[34,35] The aims of two studies[31,,36] explicitly mentioned nurses' knowledge. Four studies mentioned perceptions together with performances/ practices or meaning.[14,27,32.36] Only one study mentioned the nurses' attitudes in the aims of the study.[29]

Data abstraction

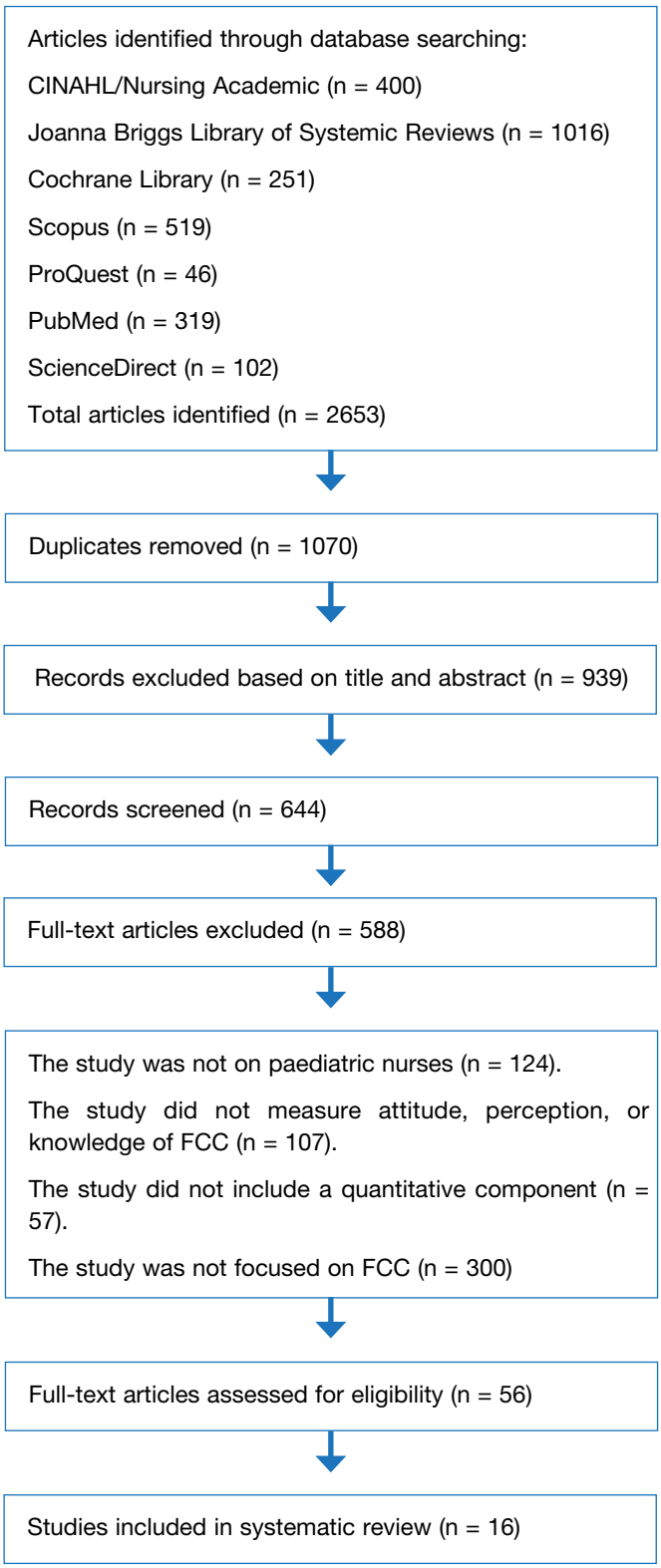

Figure 1. Data abstraction

Table 1 Quality assessment of the included studies using MMAT21

#	Author (year)	Quantitative				Qualitative				Mixed methods					Total points
		1	2	3	4	5	6	7	8	9	10	11			
1	Phiri et al (2022)	✓	✓	✓	✓								4/4	100	Strong
2	Coyne et al (2013)	✓	✓	✓	0								3/4	75	Moderate
3	Lim & Bang (2023)	✓	✓	✓	✓								4/4	100	Strong
4	Phiri et al (2023)	✓	✓	✓	✓								4/4	100	Strong
5	Aita et al (2021)	✓	✓	✓	0								3/4	75	Moderate
6	Montgomery et al (2016)	✓	✓	✓	0								3/4	75	Moderate
7	Abdel Razeq et al (2021)	✓	✓	✓	✓								4/4	100	Strong
8	Coats et al (2018)					✓	✓	✓	0				3/4	75	Moderate
9	Hadian Shirazi et al (2015)					✓	✓	✓	✓				4/4	100	Strong
10	Phiri et al (2017)					✓	✓	✓	✓				4/4	100	Strong
11	O'Neill et al (2023)					✓	✓	✓	0				3/4	75	Moderate
12.	Foster M et al (2017)					✓	✓	✓	✓				4/11	100	Strong
13	Alabdulaziz et al (2017)	✓	✓	✓	✓	✓	✓	✓	0	✓	✓	✓	10/11	75	Moderate–Strong
14	Done et al (2020)	✓	✓	✓	✓	✓	✓	✓	0	✓	✓	✓	10/11	75	Moderate–Strong
15	Paraszczuk et al (2021)	✓	✓	✓	0	0	✓	✓	✓	✓	✓	0	8/11	75	Moderate–Strong
16	Prasopkittikun et al (2020)	✓	✓	✓	✓	✓	✓	0	0	✓	✓	0	8/11	50	Weak

Key to row headings

Section 1: Quantitative

1. Sampling strategy relevant to objectives; 2. Sample representativeness; 3. Measurements appropriate; 4. Acceptable response rate

Section 2: Qualitative

5. Sources of data relevant to objectives; 6. Analysis process relevant to objectives; 7. Consideration of findings relate to context; 8. Consideration of findings relates to researchers' influence

Section 3: Mixed Methods (Sections 1 and 2 are also applicable for appraising the eligible studies)

9. Research design relevant to objectives; 10. Integration of results relevant to objectives; 11. Consideration of limitations associated with integration

Table 2 Characteristics of included articles, N=15

#	Author (year) country	Sample	Sample size	Setting	Study design	Measures	Data collected
1.	Phiri et al (2022) Malawi[26]	Nurses with at least one year of paediatric experience	444 nurses aged between 21 and 60 years	Paediatric departments of district, mission, and central hospitals	Quantitative; cross-sectional design	Family-Centred Care Questionnaire – Revised (FCCQ-R)[35]	Nurses' characteristics Current and necessary practices for FCC
2.	Coyne et al (2013) Ireland[37]	Registered nurses employed in children's wards or hospitals	250 nurses aged 20 years and above	Paediatric units	Quantitative; non-experimental survey design	FCCQ-R[35]	Nurses' demographics Nurses' perceptions of FCC activities (current and necessary)
3.	Lim & Bang (2023) South Korea[27]	Nurses working in wards and ICUs	162 female nurses aged 20 years and above	Single tertiary children's hospital	Quantitative; descriptive study design; convenience sampling	Modified version of the family-centered care measurement tool[39]	Nurses' characteristics Perceptions and performance of FCC Opinions on FCC: level of implementation; barriers to FCC
4.	Phiri et al (2023) Malawi[28]	Nurses with at least one year of paediatric experience	444 nurses aged between 21 and 60 years	Four national referral hospitals, 17 district hospitals, and 8 faith-based community hospitals	Quantitative; cross-sectional design; stratified two-stage sampling method	FCCQ-R[35]	Nurses' characteristics FCC perception FCC practice
5.	Aita et al (2021) Canada[34]	Female nurses with <5 years of NICU experience	20 female nurses with mean age of 27.86 (±5.80) years	Level III NICU with a capacity of 40 beds designed in pods (intermediate and intensive care)	Quantitative; pre-/post-intervention evaluation design	Questionnaire designed for the study[31]	Nurses' demographics Nurses' knowledge and perceptions Nurses' implementation of practices
6.	Montgomery et al (2016) Canada[35]	Nurses	36 nurses	Two paediatric inpatient units at an academic tertiary-care centre	Quantitative; single group, pretest/ post-test study	Nurses Attitudes and Behaviors about Rounds (NABAR) questionnaire [32]	Nurses' intention to practice family-centred bedside rounds (FBR)
7.	Abdel Razeq et al (2021) Jordan[29]	Nurses delivering care directly to children and working together with their families	246 nurses aged 20 years and above	Acute paediatric care settings in public, private, and educational hospitals	Quantitative; cross-sectional design; convenience sampling	Working with Families (WWF) questionnaire[36,37] and "family-centeredness" score (FCS)[38]	Nurses' demographics Perceptions of FCC and family-centeredness Factors associated with nurses' perceptions of FCC and family-centeredness
8.	Coats et al (2018) USA[8]	Bedside and charge nurses	10 nurses with mean 20 (±14.25) years of experience	Paediatric, cardiac, and neonatal ICUs	Qualitative descriptive design; purposeful sampling	Semi-structured open-ended interviews, and concurrent qualitative content analysis	ICU environment and its connection with critical care structure and provision Stressors for nurses and families Challenges and strategies associated with communication Families' involvement in care and decision-making.

#	Author (year) country	Sample	Sample size	Setting	Study design	Measures	Data collected
9.	Hadian Shirazi et al (2015) Iran[30]	Staff nurses	8 staff nurses	2 NICUs affiliated to Shiraz University of Medical Sciences	Qualitative design; purposive sampling	Semi-structured interviews, non-participatory observations, and inductive content analysis	Nurses' experiences with communicating with families in FCC (through interviews and observation) The obstacles for effective communication between nurses and families
10.	Phiri et al (2017) Malawi[31]	Full-time registered nurses with at least one year of nursing experience	14 full-time registered nurses aged between 22 and 48 years, 2 nurses had specialised in child nursing.	Government tertiary hospital	Descriptive qualitative design; purposive sampling	Interviews and content analysis	Nurses' demographics Nurses' knowledge, experience, and impressions of family involvement
11.	O'Neill et al (2023) Australia[44]	Nurses	15 nurses	Acute care wards in a tertiary paediatric hospital	Exploratory descriptive qualitative study; convenience sampling	Semi-structured focus groups and framework analysis[45,47,46]	Nurses' experiences delivering FCC to inpatients and families during the COVID-19 pandemic Impact of involving families in decision- making Quality of FCC provision What could have been handled in a different manner to deliver FCC during the pandemic
12	Foster et al (2017)[14]	Parents and staff	91 parents and 88 staff working within a paediatric high dependency unit	New Zealand Hospital	A descriptive qualitative cross-sectional design was used with a convenience sample	Written responses for open ended question	The parents' responses generated three themes (family, treatment and relationships) The staff's responses generated two themes (family and treatment).
13.	Alabdulaziz et al (2017) Saudi Arabia[7]	Female nurses	234 female nurses for survey; 10 nurses for interviews, 14 nurses for observation	Paediatric paediatric medical, surgical and oncology units of six government hospitals in Jeddah	Explanatory sequential mixed methods design	FCCQ-R, non-participant observation (convenience sampling), and interviews (purposive sampling); statistical and content analyses	Quantitative study Nurses' demographics Nurses' perceptions and performance of FCC Qualitative study Observation: nurses' FCC-related practices, communications Interviews: Nurses' understanding and practice of FCC

#	Author (year) country	Sample	Sample size	Setting	Study design	Measures	Data collected
14.	Done et al (2020) Sri Lanka[36]	Paediatric Nurses	157 nurses (quantitative study), 18 nurses (qualitative study)	Large tertiary children's hospital	Convergent, parallel, mixed-methods study design	Custom questionnaires and focus group interviews	Quantitative study Nurses' demographics Nurses' perceptions and performance of FCC Qualitative study Nurses' demographics Nurses' knowledge, practice, perceptions and challenges of FCC
15.	Paraszczuk et al (2021) USA[51]	Paediatric nurses	132 nurses	Society of Paediatric Nurses	Mixed methods	Quantitative survey with a qualitative component (text box provided for each item for participants to enter comments; three open-ended questions)	Importance of FCC to the nurses' own practice Institutions/organisations' support of FCC implementation Open-ended questions: 1) "How important is Family-Centered Care practice for you in your role?"; 2) "How important do you think Family-Centered Care is to your hospital/organisation?"; 3) "Is there anything else you would like to tell us about Family-Centered Care?"
16.	Prasopkittikun et al (2020) Thailand[32]	Paediatric nurses	142 paediatric nurses (quantitative phase), 16 paediatric nurses (qualitative phase)	University Hospital, Bangkok	Mixed methods with a descriptive comparative design; purposive sampling (by age) for qualitative study	FCCQ-R and interviews	Quantitative study Nurses' demographics Nurses' perceptions and performance of FCC Qualitative study Open-ended questions: 1) "Why did pediatric nurses in the hospital view family strengths and individuality as the most necessary elements of family-centered care and practice?"; 2) "Why did pediatric nurses in the hospital view the parent/professional collaboration as the least necessary element of family-centered care?"; 3) "Why was the design of a hospital system that was flexible, accessible, and responsive to family needs ranked least in the current practice of pediatric nurses in the hospital?"

Quantitative studies

Three of the quantitative studies[26,28,37] included in the review used the Family Centred Care Questionnaire-Revised (FCCQ-R)[38] to obtain insights regarding the nurses' practices and perceptions of FCC. Two of the studies[27,29] respectively used the Working with Families (WWF) questionnaire[39,40] and Family-Centeredness Score (FCS)[41], and a modified version of the family-centred care measurement tool.[42] Also, three out of the seven quantitative studies used a cross-sectional study design[26,28,29]; one used a descriptive study design[27]; and one used a non-experimental survey design.[37] On the other hand, Aita and team[34] used a pre-/post-intervention evaluation design using a questionnaire designed for the study and Montgomery used a single group, pretest/post-test study design using the Nurses' Attitudes and Behaviour about Rounds (NABAR) questionnaire.[35]

The FCCQ-R contains 45 items distributed over nine sub-scales representing the principal components of FCC. The basis of these are the fundamental FCC components submitted by the Association for the Care of Children's Health (ACCH)[43] and adapted by the FCC Committee of the Izaak Walton Killam (IWK) Children's Hospital.[38] Participants are required to indicate their extent of agreement regarding the activities they identified as being present in their existing nursing practice (current scale) and the activities they considered were needed to practice FCC effectively (necessary scale). A 5-point Likert-type scale (1=strongly disagree to 5=strongly agree) was provided to facilitate responses. The sub-scales in the instrument are: 1) Family is the constant; 2) Parent and professional collaboration; 3) Recognising family individuality; 4) Sharing information with parents; 5) Parent-to-parent support; 6) Developmental needs; 7) Emotional and financial support for families; 8) Design of health care system; and 9) Emotional support for staff.[39]

The Family-Centred Care measurement tool comprises 29 items distributed into four sub-scales: collaboration, family support, information sharing, and family respect; and can be used to measure perceptions and performance of FCC.[41] Lim and Bang obtained permission from the developer of the tool to alter the items to utilise a first-person perspective. This allowed the nurses to be subjects in the tool. A 5-point Likert-type scale (1=not important/never perform to 5=very important/always perform) was provided to facilitate responses regarding paediatric nurses' perceptions and performance of FCC.[27]

Aita at al[34] used a pre-/post-intervention evaluation design incorporating an FCC educational intervention which involved two stages: a reflective practice exercise, and a direct training phase to increase awareness of nurses and reinforce their interventions. The questionnaire designed for the study contained 18 items and was administered before and after the intervention.[34] Montgomery et al[35] administered the NABAR questionnaire to nurse participants before and after the attended a family-centered bedside rounds (FBR) workshop. The nurses' practice behaviours measured by the NABAR were 'open communication', 'provide information', 'provide education for families', 'help families ask questions', and 'follow up with families'.[35]

Demographic variables, such as age, gender, education level, marital status, number of children, and years of experience in childcare settings, were assessed in most of the studies. Of these, age[26], gender[28], qualifications,[26,29,36] marital status,[26] number of children,[28] religious denomination,[26] cultural background[26], familiarity with FCC[27], experience,[27,28,29] assigned ward,[26,,28] and type of hospital[26] were found to significantly influence nurses' opinions regarding FCC.

Qualitative studies

Semi-structured interviews, focus groups, and observations were the preferred methods used in the qualitative studies to obtain information from the participating nurses. The data analysis was performed using content analysis[8,30,31] and framework analysis.[45] Qualitative Content Analysis (QCA) used by Phiri et al ensured that the collected data was interrelated, suitable, and tied to values and that important patterns materialise. It has four elements for scrutinising qualitative data: creating transcripts of raw data, organising data into codes, development of categories, and the creation of themes and sub-themes.[45] Coats[8] used conventional content analysis as proposed by Hsieh and Shannon.[46] This approach entails the usage of coding categories that are directly derived from the text data.[46] Hadian Shirazi[30] used inductive content analysis which is performed at the same time as data collection and involves preparation, organising and reporting.[46] Framework analysis[48,49] on the other hand, permits the inclusive breakdown of raw data into meaningful units by explicitly pursuing the emphasis of the study by utilising a framework. This is a beneficial approach when time is limited, and there are several researchers together with an essential fixed focus.[50] Foster and Whitehead utilised inductive thematic content analysis.[14]

Studies using mixed methods.

The mixed methods studies used a combination of methods to achieve their stated purposes. Alabdulaziz[7] used an explanatory sequential design with a quantitative survey, non-participant observation, and interviews, statistical and content analyses. Done[36] used a convergent, parallel, mixed-methods study design with questionnaires and focus group interviews. Prasopkittikun[32] used a descriptive comparative design with a standardised questionnaire and interviews. Paraszczuk[51], in contrast, used a quantitative survey with a qualitative component. Alabdulaziz[7] and Prasopkittikun[32] used the FCCQ-R whereas the other two studies used questionnaires designed for the respective studies. Convenience and/or purposive sampling were used for the qualitative components of the studies.[7,32]

Salient findings from the included studies

Quantitative studies

Phiri et al[28] investigated the differences between nurses' opinions of present and required FCC practices for hospitalised children and their families based on the nine elements of the Institute for Patient and Family-Centred Care (IPFCC) framework in a study set in Malawi. These authors reported that the nurses in their study highly valued FCC practices. Also, the elements of the IPFCC were reported to be reflected in the nurses' daily care practices. Phiri noted that the participating nurses rated 'Family as the constant'

as the highest and 'Recognising family individuality' as the lowest in current practices. In necessary practices, nurses rated the developmental needs and design of the health care system as the highest and recognising family individuality as the lowest.[18] This signified that while nurses/hospitals may claim to implement FCC, some components of the IPFCC framework are overlooked.[26] Additionally, Phiri et al[26] found that nurses' age, qualifications, assigned ward, marital status, religious denomination, cultural background, and type of hospital, significantly predicted present FCC practices and the practices they perceived to be necessary, indicating that there was a greater probability that some nurses would implement FCC practices they perceived to be necessary in contrast with some others. Relatedly, Phiri et al in their examination of the effects of nurses' background characteristics on the relationship between FCC perception and practice, reported that nurses' ratings of FCC perception and FCC practice were significantly related.[28] Gender, children, clinical experience, and working in a medical-surgical ward were nurses' demographic characteristics that significantly affected the relationship between FCC perception and FCC practice.[26]

The focus of a study set in Ireland by Coyne et al was to examine the FCC-related opinions and practices of paediatric nurses and to scrutinise the considerations that impact those opinions. In this regard, Coyne[37] reported that the capabilities of nurses to satisfactorily apply FCC can be hindered by inadequate resources, poor amenities, and insufficient support. Moreover, while FCC philosophy is supported by nurses, they cannot use all components in practice due to organisational barriers, limited resources, and hospital design.[37] Coyne et al[37] found that nurses felt that FCC elements, apart from the design of the health care system, existed in their current practice. The most regularly practiced FCC element was 'emotional and financial support for families'.[36] Moreover, nurses rated the element most necessary for FCC as 'recognising family individuality'. The element least practiced was the design of the health care system. Overall, Coyne et al found nurses' FCC practices were significantly different from their perceptions of FCC and that they did not always use FCC elements in their everyday practice.[37]

Similarly, in South Korea, Lim and Bang[27] noted that nurses' perceptions of FCC were higher than their actual performance of FCC. In their investigation of the perceptions and performance of FCC of paediatric nurses in South Korea, they found that the nurses provided the highest rating for 'information sharing' and the lowest for 'collaboration' as regards their perceptions of FCC. In contrast, they provided the highest rating for 'family support' and the lowest for 'collaboration' as regards their performance of FCC. That is, the nurses acknowledged that supplying information to families regarding the treatment, care, and illness of the patient is essential in FCC.[27] Additionally, Lim and Bang reported that the nurses' ratings of their perceptions and performance of FCC were significantly correlated. Their ratings of information sharing, respect for family, family support, and collaboration, were also significantly correlated across perceptions and performance.[27]

The focus of the two Canadian studies included in the review was the usage of educational interventions to improve family-centred nursing practices. Aita et al in 2021 compared nurses' knowledge and perceptions of FCC along with the implementation of nursing practices before and after an FCC educational intervention to help adaptation of families and siblings during NICU hospitalization. They noted that the opinion of nurses concerning knowledge, perceptions, and implementation of nursing practices was more favorable following an FCC educational intervention. Consequently, their findings reinforced the value of using educational training programs to enhance NICU nurses' practice of FCC.[34] Similarly, Montgomery et al in 2016 reported that educational workshops can positively affect nurses' attitudes and beliefs about FBR. Their study found statistically significant increases between pretest and post-test scores on FBR-related intentions, subjective norms, and perceived behavioural control of nurses, and on supplying families with education regarding FBR.[35]

In a study set in Jordan, Abdel Razeq et al[29] in 2021 explored nurses' perceptions of FCC and their extent of family-centeredness. Moreover, they compared the nurses' attitudes toward working with children and their parents. This study reported that nurses' attitudes toward working with children differed significantly from their attitudes toward working with their parents. Furthermore, the family-centeredness scores varied with nurses' years of clinical experience, years of employment, and specialised qualifications in paediatrics.[29]

Qualitative studies

In a study set in Iran, Hadian Shirazi et al[30] reported that the main obstacles to nurse-family communication were associated with the organisation, family and nurses. For example, organisational factors were comprised of educational and clinical factors. Educational factors included insufficient education (shortfalls in specific knowledge, skills in communication, and inter-professional training), the non-existent system for the selection of nursing students, and weak professionalisation. Clinical factors included challenging work environments (insufficient nurses and time, demanding workload and administrative matters, discrepancy between effort and output, and the effects of specialised wards), absence of an effectual system for continuing training and assessment, authoritarian style of management, and weakness in communication among nurses, and among nurses and other healthcare staff. On the other hand, familial factors pertained to factors associate with the families: psychological, sociocultural, and economic. Psychological factors comprised the varied responses of families regarding the ward and their refusal to accept the condition of the neonate. Sociocultural dimensions included varied cultural levels, unfamiliar cultures. Economic facets pertained to financial challenges. Finally, nurse-related factors encompassed two areas: psycho-physical (such as, tiredness, numerous work shifts, problems with family) and sociocultural (interacting with neonates' fathers in the NICU).[30]

Phiri[28] reported that nurses in Malawi believed that working with family members was rewarding and beneficial since they enhanced care diversity. Where cooperative, nurses

could benefit substantially from them if they were properly utilised, and they deserved to participate. On the other hand, the nurses also indicated that working with family members could be demanding/taxing and hence hinder the achievement of day-to-day nursing schedules. This was because of families' negative attitudes concerning nurses, and some family members' slowness in gaining skills, and their challenges in understanding nurses' instructions. Some family members were extremely trying, whereas others delayed bringing their children to the hospital until the condition had deteriorated making it a taxing experience for nurses. Some nurses also felt that their experience with FCC resembled encounters with multiple realities due to the mixed character of their experiences.[28] Additionally, Phiri reported that nurses' knowledge of FCC included their understanding that family involvement pertains to methods of including family members in the child's care from admission, through nursing care and assessment, ending with the child's discharge or death. Also, their reasons for involving families included responsibility-sharing, societal support, family being care experts and cooperative decision-making. Moreover, Phiri and team reported that nurses believed that family participation was a beneficial concept since it could enhance quality of care, though it required regulation.[31]

Coats et al[8] reported that the nurses in the US felt that the change to FCC and the related alterations in the policy and physical settings were beneficial for families. Also, the nurses described how alterations had resulted in fresh challenges for the provision of nursing care in ICUs, highlighting mentorship and patient and staff safety, in particular. They further believed that delivering quality FCC is a "balancing act" characterised by the association between two forms of changes namely, changes to ICU policies associated with hours of visitation and presence of family at the patient's bedside, and the conversion of the physical ICU setting to individual private rooms from a shared open space.[8]

O'Neill et al[44] explored how nurses provided FCC during the pandemic environment in Australia. This qualitative study identified four themes mapped onto the original FCC principles. The themes describe how FCC is implemented by nurses and the sub-themes describe how the pandemic environment and associated hospital restrictions affected FCC actions. The first theme of advocating with empathy (dignity and respect) was realised by appreciating family vulnerability due to social isolation and visitor restrictions during COVID-19; and negotiating rules by seeking available exemptions when appropriate. The second theme, enabling communication (information sharing), was realised by using technology and considering the impact of PPE on caring for families. That is, nurses made necessary adaptions to ensure sufficient communication. The third theme, responding with flexibility (participation and collaboration), signifies the action of nurses in ensuring the participation and collaboration of child and family and permits nurses to meet the family "where they were" to obtain input into their child's care. The enhanced dependence on the nurse in the absence of other supports during the pandemic was reflected in the sub-themes of minimising the impact of restricted support and adapting to a changing environment. Finally, the fourth theme, balancing competing considerations (zero harm), was contained in the study site hospital policy on FCC. The participants indicated that the possibility of achieving zero harm was reduced further in a pandemic. They considered their role, instead, as preventing harm by weighing risks and coping with moral concern and remorse.[44]

Foster and Whitehead's[14] New Zealand study investigated meanings and descriptions around family-centred care among clinicians working in paediatric critical care settings and found three themes surrounding FCC: Family, Treatment and Relationships. Staff meanings were reported in relation to the first two themes where staff described the need to understand the impact of illness or injury on the family, considering the child and family to be a unit, and the need to respect, validate, assist or support families. They also reported communicating with parents and families about the child's care and treatment decisions. Within the Treatment theme nurses reported working alongside the child and family as a team and highlighted the importance of relationships but emphasised the centrality of the child as the primary focus for care.[14]

Mixed methods

In their mixed methods study set in Saudi Arabia, Alabdulaziz et al[7] explored FCC in the Saudi context by examining nurses' perspectives, beliefs, and practices. Among FCC elements, 'Recognition of family individuality', 'emotional support for staff', and developmental needs' received the top ranking as areas of the nurses' perception and practice domains. The elements with the lowest ratings were 'Family is the constant' and 'Parent-to-parent support'. Overall, Alabdulaziz et al reported that while paediatric nurses in Saudi Arabia appear to have accepted the Western concept of FCC, nurses in Saudi Arabia were lagging in their knowledge of FCC as this topic has not yet been introduced in the Saudi context. Also, the knowledge of nurses of the theoretical concepts underlying FCC as a model of care was found to be limited. Moreover, significant differences were found between the perceptions and practices of nurses regarding the FCC elements. Alabdulaziz et al concluded that there was a low probability that the full adoption of FCC, according to Western values, would be suitable or effective in the Saudi setting. Furthermore, the Western FCC model required cultural adaption and additional development to fit Saudi and Middle Eastern cultures.[7]

Done et al[36] explored the perceptions and performance of FCC, the feasibility of implementing FCC, and the status of FCC in paediatric nursing in the context of the Sri Lankan healthcare system. From the quantitative element of their study, Done et al found that regarding FCC perceptions, family participation was the element that received the highest score followed by respect and dignity, information-sharing, and collaboration. On the other hand, regarding the performance of FCC, information-sharing received the highest score, and collaboration received the lowest. The nurses perceived that a strength of implementing FCC was increased family satisfaction whereas a lack of FCC knowledge was a weakness. Moreover, nurses believed that an opportunity to implement FCC was the improve nurses' status and public image. The high nurse-to-patient ratio, on the other hand, was viewed by them as a threat. From the

qualitative element of their study, Done et al[36] found that FCC was an essential element of delivering care to children and cannot be achieved without families; parents are a powerful source of pertinent information; and act as their children's advocates; focusing on the family could help enhance mutual trust; nurses find inputs from family members beneficial in enhancing their knowledge and skills; family bonds can be reinforced by supplying knowledge and skills regarding caring for children to the family. The nurses practiced some facets of FCC though they did not have in-depth learning about FCC; some elements were delegated to parents. Barriers to practice include insufficient learning about FCC; absence of refined communication capabilities resulting in challenges in informing families about various facets of the children's care; low power in the healthcare system due to lack of nursing staff; and overcrowding. The nurses suggested that FCC be introduced into the fundamental curriculum and continuing education. Evaluation of FCC practice could be achieved by collecting data regarding parents' satisfaction. The nurses also suggested the need for a family-friendly environment to be created and the accompanying need to modify hospital policies appropriately.[36]

In 2021, Paraszczuk et al[51] examined the importance of the FCC to paediatric nurses and their view of their organisations' support of FCC implementation in the US. In the quantitative element of their study, nurses' responses and the rating of their organisations were analysed separately. There was a significant difference in the mean scores between nurses' responses and the mean scores for their organisation's support of FCC. Nursing education and size of the institution significantly influenced mean scores for nurses' self-reported FCC signifying that nurses' education can influence their knowledge of FCC, and the size and/or complexity of the organisation can serve as barriers and/or facilitators of FCC implementation. From the qualitative element of their study, Paraszczuk et al reported that there are challenges in implementing a homogeneous FCC process due to variances between the institutional model and the bedside delivery of FCC; there is a need to build capacity for FCC that essentially focuses on the interest of children and families; FCC is followed since it is valued by nurses and physicians; they believe the core principle of FCC is to deliver care that is in the child's best interest; no dispute regarding making FCC a priority as "nurses make it a priority." Moreover, Paraszczuk et al found that "one size does not fit all". That is, a uniform FCC model will not suit all environments; FCC may be best seen as a philosophy to guide nursing practice; while there are variations in environment and unique conditions where FCC is practiced, these may serve as barriers or facilitators in delivering FCC. Finally, Paraszczuk at al found that congruence between plan and practice is required for successful FCC implementation; the top-down model, administrative support, non-availability of FCC across shifts, lack of team collaboration philosophic differences, were facets that impacted successful FCC implementation.[51]

Prasopkittikun et al[32] conducted a study to find out the perceptions and practices of family-centred care among Thai paediatric nurses. The outcomes of their quantitative results revealed that family strengths, individuality, and sharing information were rated as the most necessary elements for FCC whereas parent/professional collaboration was perceived as the least important element. The most frequently practiced FCC elements in current practice were recognition of family strengths and individuality. The least frequently practiced FCC element was the design of the health care delivery system. The highest gap between the perception of necessity and current practice was seen in the design of the health care system. Their qualitative findings revealed that the most important FCC components were family strengths and individuality. Parents are important as a component of health care, as they are principal caregivers who know their children best. Each family has varied strengths, specifically as regards their willingness to provide care for their sick children. Designing systems for healthcare delivery is outside the authority of nurses. The shortfall of nurses can impede responsiveness to family needs. Overall, the main reasons for sub-optimal FCC implementation included a typical view that FCC is a Western notion, weak attitudes of nurses to their roles, and a deficit of nurses. Prasopkittikun et al concluded that FCC does not match with healthcare delivery in the Thai context.[32]

Discussion

This systematic review aimed to synthesise studies related to nurses' FCC-related attitudes, knowledge, and perceptions in paediatric hospital care settings. Sixteen studies met the inclusion criteria in the review.

Nurses' attitudes (feelings and beliefs) toward FCC

Only one of the included studies[28] mentioned nurses' attitudes in their aims. This study found that nurses' FCC attitudes differed depending on whether they were dealing with children or their parents. Also, the work-related characteristics of nurses (such as their years of clinical experience, overall years of employment, and specialised qualifications) impacted their attitudes to FCC and family-centredness indicating that the attitudes of nurses towards FCC could change with knowledge and experience. Relatedly, Montgomery[35] reported that the attitudes could be favourably impacted by educational workshops. Despite the limited evidence uncovered in this review, nurses' attitudes towards FCC are a significant contributor to their practice and performance of FCC.

Nurses' knowledge (information and skills) of FCC

Of the included studies, only two explicitly mentioned nurses' knowledge of FCC in their aims.[31,34] Nevertheless, the knowledge of nurses has highlighted in the findings of four other studies[7,30,,32,52] indicating that FCC knowledge was an essential aspect of FCC implementation in a paediatric setting. Overall, in line with prior research which has revealed that the knowledge of nurses to practice often impacts the actual provision of FCC in a healthcare setting[7,8,9] the review found increasing the FCC knowledge of nurses appeared to be a critical facet which could hinder FCC practice and performance. Relatedly, two studies[31,32] assessed the impact of educational interventions on nurses' implementation of FCC and found favourable outcomes.

Nurses' perceptions (interpretation and understanding) of FCC.

The outcomes of the studies included in the review indicated that the perception of nurses regarding FCC varied globally as nurses working in the Western countries appeared to demonstrate greater levels of perception of FCC compared to the nurses in other regions. A study conducted in Saudi Arabia showed that nurses had perceived FCC as a western concept and not appropriate for Middle Eastern cultures.[7] The same study also indicated that non-Saudi nurses had a better perception of FCC than the Saudi nurses. Other included studies revealed that the information sharing sub-scale of FCC had a higher score than collaboration with parents.[31,35] Moreover, paediatric nurses often perceived that the organisational support for the implementation of FCC was low.[50] In addition, nurses considered that FCC practice could be impeded by sociocultural aspects, such as the social context of the child's family or gender segregation.[27] Also, nurses perceived that changes to the environment could impact their FCC practice, such as when the COVID19 pandemic restricted hospital visiting policy.[41] Overall, the evidence from the included studies indicated that various factors could influence the perception of nurses towards FCC, and these required to be managed through education or organisational support.

Strengths and limitations

PRISMA guidelines[18] were applied to guide the search procedure employed in the review and to ensure that a high methodological standard was utilised in the review. The quality of the research process was supported by the involvement of a health librarian in devising the search strategy and independent screening for articles for inclusion by two reviewers. The authors however, acknowledge that despite these processes, some articles may have been missed and not including search terms such as 'hospital' may be a limitation.

Implications for practice

FCC is a philosophy that has been widely accepted in paediatric practice.[1] Accordingly, there is considerable research attention related to the factors which facilitate its successful practice. The findings from the review indicate some simple implications for FCC practice.

Organisational resources must be maximised to facilitate nurses' FCC practice. This could involve updating undergraduate and postgraduate nursing curricula, on-the-job training and support, and continuing education programme, to constantly improve nurses' knowledge, awareness and attitudes towards FCC.

Workshops, seminars, and conferences could be organised by the local healthcare authorities to ensure that nurses are able to share their experiences and best practices and benefit from their colleagues similar or diverse experiences.

Similar workshops could also be organised to include nurses and the other healthcare personnel who may be indirectly involved in/impacted by FCC. Such multidisciplinary interactions and collaborations could facilitate greater support for nurses in effectively implementing FCC in their daily practice.

Studies performed in the Middle East[7,29] highlighted that the implementation of FCC could be considerably hindered by the sociocultural norms of the countries and the present, dependence on expatriate staff. Consequently, there is a pressing need to evaluate the customisation of FCC principles to suit varied sociocultural contexts. There is also a corresponding need to explore the nursing curriculum in these countries to identify facilitators and barriers to FCC and investigate strategies to increase nurses' awareness of global nursing practices that promote FCC.

Conclusion

This review focused on nurses' knowledge, attitude and perceptions of FCC as pertaining to children and their families in paediatric hospital settings. The findings of the study indicate that while FCC principles appear to be accepted and implemented across the globe, there are several factors which can influence nurses' actual practice of these including their personal characteristics, the surrounding work environment (such as the design of the health care system), and the sociocultural environment of their work. The findings further indicate the need for continual support or enhancement of nurses' knowledge of FCC practices and the management of aspects which can influence their attitudes and perceptions to FCC. Nevertheless, there is a need for continued research attention to confirm the impact of nurses' knowledge, attitudes, and perceptions of FCC, on the efficacy of their FCC practices by examining family and social outcomes.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported of this paper. Author EM Forster is Editor-in-Chief of the JCYPH and as an author was excluded from decision making processes in relation to this submission. The manuscript was managed from submission through to final decision by an Associate Editor.

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