

Assessing the maturity of the "Family Centered Care" concept: A review of concept analyses studies

Background: Concept analysis studies play major role in clarifying and operationalizing concepts. This approach has been used to clarify and advance knowledge about the concept of Family Centred Care (FCC). The concept of FCC has been studied by many nursing scholars using different methods.

Aim: This review aimed to combine outcomes of concept analysis studies to assess the level of maturity of the concept of Family Centred Care

Methods: Formal electronic databases (MEDLINE and CINAHL) and informal (Google Scholar) were searched using the terms "Family Centred Care" and "concept analysis". The Morse concept maturity evaluation approach was used to appraise the retrieved studies.

Results: 35 studies were identified of which 12 met the inclusion criteria and were included in the analysis. Three studies used Walker and Avant concept analysis methodology, three applied the Rodgers evolutionary model while six applied modified mixed/hybrid approaches. While a few provided a definition of FCC, none have been able to confirm the maturity of the concept. This review summarized the different trials to analyze the concept of FCC supporting the rethinking of the model and emergence of new models such as Child and Family Centred Care (CFCC).

Implications: Concept analyses should be done periodically to assess the maturity of emerging concepts. Previously published FCC concept analyses manuscripts show the concept has evolved and gained significant recognition and acceptance over time. A clearer definition of FCC supports its positive impact on patient outcomes. A comprehensive FCC tool that can evaluate the effective delivery of FCC is needed.

Key words: Concept analysis, Family Centred Care, Children, Family

Introduction

Family Centred Care (FCC) is a model of care involving planning, delivery, and evaluation of care for children in different settings (Krajnc & Berčan, 2020). FCC was developed over 50 years and continues to appear as a cornerstone in the nursing care of children, young people and their families (Jolley & Shields, 2009). The dissection of the term reflects the essence of the model where "family-centered" signals care towards all family members including the ill child. The model has been studied by many scholars from different parts of the Western and non-Western world using different methodologies including reviews, experimental, and qualitative designs (Festini, 2014; Kelly et al., 2019; Kokorelias et al, 2019; Kuo et al, 2012; Chasweka et al, 2023). As an important aspect of paediatric nursing, the concept has also been explored and analyzed in multiple settings (Feeg et al., 2016; Kelly et al., 2019). Different conceptualizations have been provided in the literature, where confusion and ambiguities have encouraged scholars to study the concept and its roots (Coyne, Holmström & Söderbäck, 2018). The aim of this review was to combine outcomes of published concept analysis studies of FCC with the objective of assessing the level of maturity of the concept.

Family Centred Care

Given the dependent needs of children, FCC is a vital approach in the caring process of children (Wolf et al., 2008; Al-Motlaq et al., 2019; Shields, 2015). While many studies have provided evidence that family-centered care improves experience and performance (Yoo & Ahn, 2019), there are reports showing its weak efficacy towards achieving its theoretical goals (Shields, Pratt & Hunter, 2006; Watts et al., 2014). The emergence of the FCC model over a long period of time has contributed to this

weakness. Recently, new approaches have emerged and gained more attention hoping to close the gap between the theoretical approach and its implementation including Child and Family Centred Care (CFCC) and Child Centered Care (CCC) (Coyne, Holmström & Söderbäck, 2018; Foster, 2015; Regan, Curtin & Vorderer, 2017).

Concept analysis

Researchers conduct concept analysis to clarify concepts and to provide an operational definition (Smith and Morelius, 2021). It explores how a concept is described and measured in context, hence informing evidence-based practice (Smith and Morelius, 2021). Many forms of concept analysis methods exist in the literature. They employ qualitative, quantitative or both approaches. An example of a qualitative method is the Morse (2016) utility method. Examples of mixed methods include Walker and Avant (2011); Rodgers (1989) evolutionary approach; simultaneous concept analysis (Haase et al. 2000); principle-based concept analysis (Penrod & Hupcey, 2005); modified principle phased approach (Smith and Morelius, 2021); and other hybrid models of concept development (e.g. Schwartz-Barcott, 2000). Through determining the defining attributes of the concept it is possible to conduct more rigorous analysis and provide a better understanding consequently further advancing knowledge and practice. Because nursing concept analyses are intended to contribute to theory development, the scientific pattern of use is important (Risjord, 2009).

Rationale for this review

Concept evaluation is the process by which the maturity of a concept is appraised. Concepts start tentatively and overtime they mature. According to Morse et al. (1996) the level of maturity (immature to well-developed mature concept) depends on the transformations and the development they undergo. Unclear immature concepts

can be mixed with other concepts. The maturity of a concept is evaluated to determine the most appropriate strategies for subsequent knowledge development. The process of assessing the maturity of concepts is a systematic process usually assessed on an immature –mature continuum. Questions to be asked in evaluating the maturity of a concept (Morse, 2016): Is it well-defined and described? Does it have concise attributes, clear boundaries, and documented outcomes? Has it been used clearly in research and practice? Is there a consensus for its use between researchers and practitioners? Is there a measure of the concept that can be used in a quantitative inquiry? Has the concept been used in other disciplines/ other contexts to refer to the same phenomenon? In addition to consensus among researchers, if the concept has been used correctly in quantitative studies, that means it is measurable and hence mature. Scientifically, a concept must be assessed as mature before it is used in quantitative inquiries. Experts must develop the concept before they proceed to measure its effect and/or manipulate it. When consensus is reached among researchers, practitioners and theoreticians on its definition and application, a concept can be considered mature (Morse et al. 2002). A concept can be delineated as mature if no further significant changes in its current shape are necessary (Morse et al. 1996). The literature on immature and/or intermediate state concepts show faults, contradictions and competing concepts (Morse, 2016). When concepts are immature, the integrity and progress of scientific inquiry is affected (Branch & Rocchi, 2015). Researchers may misinterpret findings leading to incorrect conclusion and poor communication of results affecting its applicability.

Method

Researchers use different approaches in their concept analysis studies. However, they all aim to clarify concepts and build theoretical knowledge to facilitate its application

in practice. Having one clear definition of FCC makes it easier for healthcare providers from different disciplines and settings to better apply its' core concepts. The current literature review collated outcomes of concept analysis studies on FCC to evaluate the maturity of the concept. The process involves two steps 1) searching databases for articles and 2) critically appraising the selected studies. A third step was added with the aim of extracting antecedents, attributes and consequences of FCC in the most recent included articles.

The first step was searching formal (MEDLINE, CINAHL) and informal (Google Scholar) databases using the terms "Family Centered Care" and "Concept Analysis" in its different spelling combinations including only studies that provided an analysis of the FCC concept in the pediatric population. A total of 76 citations were identified. Articles were initially screened by reading the abstracts and contents. Duplicates were removed leaving 32 studies of which 19 were excluded as they did not meet the criteria of being a concept analysis of FCC. These excluded studies focused on one dimension of FCC concept such as support (Stoltz, Andersson & Willman, 2007); care coordination (Anderson & Hewner, 2021); partnership in nursing care (Yuan & Murphy, 2019); and patient empowerment (Lind & Ginn, 2019). Excluded studies also included critical reviews (Franck & Callery, 2004); theoretical discussions (Risjord, 2009); concept analysis of FCC in the adult population (Moradian 2018); using other languages (Jung et al., 2017); and old reference (Nethercott, 1993). This process resulted in the identification of 12 concept analysis studies for inclusion in the current review.

The second step was critically and systematically appraising the included studies based on Morse et al. (2002) criteria for concept maturity evaluation. According to Morse (2016), a conceptual analysis includes the epistemological

principles (clarity of definition, boundaries, attributes, preconditions, and outcomes), the logical principles (consistently and systematically related to other concepts), the pragmatic principles (concepts appropriately operationalized in research and practice), and the linguistic principles (concepts appropriately used in various contexts). The parameters for evaluating the maturity of a concept and its principles are classified into immature, partially mature and mature (Morse et al., 2002).

For this study, two authors independently reviewed the outcomes of the concept analysis in each of the included articles and appraised the level of maturity of the FCC concept. Regardless of the method used by the original authors of each article, the current appraisal involved analysis of each principle (epistemological; logical; pragmatic; and linguistic) in each of the included concept analysis study using the maturity scale (immature /partially mature/ mature). Based on the analysis provided in each article, a principle was considered mature if the four principles in each article were clearly appraised as mature (well defined with no competing concepts; fits with phenomenon [operationalized]; has no confusion with other concepts within context; and used in theory). If one or more principles were not considered mature, then a decision of partially mature was made (i.e. has multiple competing definitions/concepts; partial fit with phenomenon [partially operationalized]; partially linked to context; and has some linkages to other concepts. For example, if a concept analysis study provided a clear definition of the FCC concept with clear principles except for the pragmatic principle then it is said to be partially mature. If the concept has no or inadequate definition; not operationalized; confused with other concepts within context; and doesn't hold boundaries with other concepts then its appraised as immature (Morse et al., 2002). The outcomes of the

synthesis were contrasted, compared, and integrated to reach a decision about the level of maturity provided by each analysis.

The third step was extracting the theoretical relationship between antecedents, attributes and consequences of FCC. To conform to the study objective of assessing the maturity of the concept, the four most recent articles were utilized for this purpose. Antecedents offer perspective on the social context of the central concept under analysis (i.e. the events that must happen before the concept occurrence); attributes provide the most frequently associated referents to the concept under analysis (i.e. the terms that help to differentiate the concept from other related concepts); and consequences are a result of the concept occurring (i.e. the events that occur as a result of the concept) (Walker & Avant, 2011).

Results

A total of 12 studies have been analyzed for the purpose of this review (Table 1). All conducted a concept analysis of the FCC model and used one of the formal scientific concept analysis methods (Hutchfield, 1999; Malusky, 2005; Mikkelsen & Frederiksen, 2011; Ramezani, Shirazi, Sarvestani, & Moattari, 2014; Seyedfatemi, Hamooleh, Borimnejad, & Tahmasebi, 2014; Khajeh, Nayeri, Bahramnezhad & Hoseini, 2017; Smith, 2018; O'Connor, Brenner & Coyne, 2019; Rakhmawati, Nurhidayah & Adistie, 2020; Larocque, Peterson, Squires, Mason-Ward, Mayhew & Harrison, 2021; Seniwati, Rustina, Nurhaeni & Wanda, 2023; Wilson, 2023). The analysis process found that three studies used Walker and Avant concept analysis methodology (Smith, 2018; Rakhmawati, Nurhidayah & Adistie, 2020; Seniwati, Rustina, Nurhaeni & Wanda, 2023), three applied the Rodgers evolutionary model (Ramezani, Shirazi, Sarvestani & Moattari, 2014; O'Connor, Brenner & Coyne, 2019;

Larocque, Peterson, Squires, Mason-Ward, Mayhew & Harrison, 2021), while the remaining six studies applied modified mixed/hybrid approaches including the Rodgers' and Schwartz-Barcott and Kim's hybrid model; and Risjord's model. Most provided primitive definitions to the FCC concept or referred to a previous definition. The analysis of these 12 studies found that during the 24 years from 1999 to 2023, the concept of FCC continued to mature and develop. It can be clearly seen from each analysis that the concept evolved from a simple combination of ideas to a complex phenomenon (Table 1). The outcomes of the maturity analysis show a gradual maturity where FCC started as immature concept and passed through partially mature period then reached the maturity state in the most recent concept analysis (Wilson, 2023) within the childhood cancer context.

The theoretical relationship between antecedents, attributes and consequences of FCC were extracted for the four recent articles (table 2). The analysis show that for FCC to occur family and health care provider must have the knowledge and willingness to collaborate; and the environment and policies must be supportive. The analysis also shows that FCC involves family participation and collaboration in a space of respect positive communication, compassion and customized care. As a consequence, this leads to improved child outcomes, enhanced wellbeing, and quality of care.

Please insert Table 1 here

Please insert Table 2 here

Discussion

A concept analysis methodological approach as undertaken in this review is a rigorous process where a concept is explored, defined, and differentiated from other concepts (Morse et al. 2002; Morse et al. 2016; Walker & Avant, 2011). Of interest, Rodgers evolutionary concept analysis asserts that concepts change over time and settings, as concepts are influenced by social and contextual factors (Rodgers & Knafl., 1993). Rodger's conceptual analysis approach states 'analysis merely indicates a direction for further research and does not provide a definite conclusion', whereas Walker and Avant (2011) state the goal of a concept analysis is to elicit an operational definition of the concepts (Walker & Avant 2011).

This review successfully mapped out the journey of published FCC concept analysis manuscripts, to assess level of maturity over time. It is evident within this review that FCC has evolved and gained significant recognition and acceptance over time, however, the degree to which it is practiced varied across different healthcare settings, countries, and time. Another way to evaluate maturity of a concept is to assess the widespread adoption, integration, and depth of implementation into healthcare systems which can also be recognized as early or mature stages (Pfadenhauer et al., 2015). An evaluation of maturity includes assessing a concept's integration into practice, healthcare culture, and policy. This can be achieved by training, educational programs, professional development opportunities, active involvement, and feedback from key stakeholders with a strong focus on cultural competence to meet the diverse cultural backgrounds and needs of patients and families (McCarthy & Guerin, 2022; Phiri, Chan & Wong, 2020).

It is evident in the wider literature that FCC emerged as a cornerstone of paediatric health care that evolved over time from other primitive approaches such as partnership in care and care by parents (Shields et al., 2006). It is important to note

that the initial development of FCC occurred in response to global changes in the rights of the child and mandates for increased family support (Coyne, Holmström & Söderbäck, 2018; Jolley & Shields, 2009). Although there is a consensus regarding the philosophy and significance of FCC in paediatric care (Al-Motlaq et al., 2019), its' operational definition and implementation is inconsistent (Foster & Whitehead, 2017; Kuo et al., 2012). Absence of a universal standardized agreed upon FCC definition and/or clinical guideline has had disadvantages for health care providers, families, and children over time (Davidson et al., 2017).

The present study showed that authors were successful in providing clear analysis of FCC antecedents, attributes, and consequences. It was evident in the manuscripts that different authors shared universal attributes of FCC, with the main FCC attributes (terms that help differentiate the concept from other related concepts) shared across all manuscripts being *partnership*, *communication*, and *collaboration*. However, the literature refers to a wider range of principles being key to FCC such as collaboration, partnership, communication, information sharing, trust, respect, cultural competence, diversity and inclusion, support, and continuity of care (Dennis et al., 2017; Uniacke, Browne, & Shields, 2018). The authors were also successful in clarifying competing terms and providing examples of model, borderline, and contrary cases to practically clarify the concept. However, the majority agreed that the concept was pragmatically not clear (its measurement and application). This review has highlighted that FCC is a very complex, multi-dimensional concept that changes over time and setting. Among the twelve included studies, only one was agreed upon by the reviewers to have revealed a mature concept (Wilson, 2023). The context of childhood cancer might be the reason behind this maturity state where more attention

is given to the role of families in the treatment of children living with a chronic illness.

Strengths and limitations: This was the first review of concept analyses on FCC. The review provided a consequential flow of these studies from 1999 to 2023. The diverse methods used across the 12 studies can be considered a strength. The quality of included studies varied with some more detailed and comprehensive than others. The limitations inherent within these studies can be added to the overall limitation of the current review. While the used scale of concept maturity is rigorous given its structured format, the subjective nature of appraisals by researchers is affected by personal biases hence can be considered a limitation.

Implications for research and practice: This concept analysis revealed that FCC is a complex concept. Such complexity makes it difficult to comprehensively evaluate FCC maturity over time. Through increasing the focus on FCC maturity and evolution over time, future practice and research will have a clearer definition of FCC concepts to ensure ongoing development that supports the positive impact FCC has on patient outcomes, satisfaction, and overall healthcare quality. In addition, co-design participatory research with families and children is needed to design a comprehensive FCC tool that can evaluate the effective delivery of FCC attributes in different healthcare settings. FCC should be viewed as an evolving process. On the other hand, recent developments of paediatric health care services have rippled through the global health care systems leading to the emergence of contemporary types of service delivery models (e.g. Child and Family Centred Care, Child Centred Care and Family Integrated Care). These have emerged as a natural response to the shortcomings experienced by FCC.

Linking evidence to practice

- Concept analyses should be done periodically to assess the maturity of emerging concepts.
- Previously published FCC concept analyses manuscripts show the concept has evolved and gained significant recognition and acceptance over time. A clearer definition of FCC supports its positive impact on patient outcomes.
- A comprehensive FCC tool that can evaluate the effective delivery of FCC is needed.

CONCLUSION

This review provided a summary of the previously conducted content analyses on FCC. The outcomes show the gradual development of the concept which hardly reached maturity within the contexts it has been applied in, shifting the focus of scholars to consider other approaches. This concept analysis provides information which can be used to direct future nursing practice, education, research, and management.

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Table 1: maturity appraisal of the included article

No	Reference	Concept analysis method	Objective	Appraisal of its level of maturity (mature/partially mature/immature)	FCC definition provided/notes
1	Hutchfield(1999) Family-centred care: a concept analysis.	Combined (Rodgers' model and Schwartz-Barcott and Kim's hybrid model).	Facilitate a dispositional approach to analysing this concept.	Epistemology: (immature) Pragmatic: (immature) Linguistics: (partially mature) Logical – (immature) Overall -immature	No definitions provided. This concept analysis recommends that FCC must be tested and developed in the real world in order to move the concept of FCC forward to contribute to the body of knowledge that constitutes children's nursing. This implies that there may be problems implementing some aspects of FCC that warrant further study.
2	Malusky (2005) A concept analysis of family-centered care in the NICU.	A 1995 framework for concept analysis to clarify the meaning of FCC.	A concept analysis can often aid understanding of abstract ideas such as FCC.	Epistemology – (immature) Pragmatic – (immature) Linguistic: (mature) Logic – (immature) Overall –immature	There are several implications for nursing that would foster FCC in the NICU. Establishing relationships with the infant's family is essential in the promotion of FCC. First is a respectful collaboration between the health care team and the family, with the goal of including the family in the decision making and care of their infant.
3	Mikkelsen &frederiksen (2011)Family-centred care of children in hospital – a concept analysis.	Concept analysis influenced by Risjord's based on Morse, Hupcey and Penrod.	This paper reports a concept analysis of family-centred nursing care of hospitalized children.	Epistemology: (mature) Pragmatic: (partiallymature) Linguistic: (partially mature) Logic: (partially mature) Overall - partially mature	FCC is the professional support of the child and the family through a process of involvement and participation, underpinned by empowerment and negotiation. FCC is characterized by a relationship between healthcare professionals and the family, in which both parts engage in sharing the responsibility for the child's health care.
4	Ramezani, Shirazi, Sarvestani, & Moattari (2014) Family-centered care in neonatal intensive care unit: a concept analysis.	Rodgers's concept analysis.	Since we require clarity in our understanding, we aimed to analyze this concept.	Epistemology–(mature) Pragmatic: (partially mature) Linguistics: (immature) Logical- (mature) Overall - partially mature	FCC is defined as an inter-disciplinary, comprehensive, and holistic care of neonates and families with maintaining their respect and dignity. Nonetheless, providing FCC results in promotion of the services' quality. Nurses' responsibility is to interact with family members and enable them as far as possible to make positive changes on the basis of their individual capabilities.

5	Seyedfatemi, Hamooleh, Borimnejad, & Tahmasebi (2014) Concept analysis of family-centered care in cancer using hybrid model: a qualitative study.	Hybrid model.	The purpose was analyzing the concept of FCC in cancer.	Epistemological: (immature) Logical: (immature) Pragmatic: (partially mature) Linguistic: (immature) Overall - immature	The categories included existence of family in clinic, family security and family support, family participation in care, communication between nurse and family, exposure to tension and family participation in decision making.
6	Khajeh, Nayeri, Bahramnezhad, & Hoseini (2017) Family centered care of hospitalized children: a hybrid concept analysis in Iran.	Hybrid model.	Conducted to analyze the concept of FCC in Iran.	Epistemological: (partially mature) Logical: (immature) Pragmatic: (immature) Linguistic: (partially mature) Overall – immature	is ‘a holistic approach to health care decision-making between the family and healthcare provider about all of the care processes such as policy and program development, implementation, evaluation, education, and delivery of care.
7	Smith (2018) Concept analysis of family-centered care of hospitalized pediatric patients.	Eight-step methodology of concept analysis described by Walker and Avant.	To provide a background of FCC of the hospitalized pediatric patient, clarify its components, and validate its significance to nursing practice and research.	Epistemological: (mature) Logical: (partially mature) Pragmatic: (partially mature) Linguistic: (partially mature) Overall – partially mature	Family-centered care can be theoretically defined as a philosophy of care that recognizes the family as central to the patient's life, views the patient in the context of the unique family, and supports family members in their role as caretakers.
8	O'Connor, Brenner & Coyne (2019) Family-centred care of children and young people in the acute hospital setting: a concept analysis.	Rodgers' evolutionary approach.	To provide an operational definition of FCC as it applies to hospitalised children.	Epistemological: (partially mature) Logical: (partially mature) Pragmatic: (partially mature) Linguistic: (partially mature) Overall - partially mature	as “a way of caring for children and their families within health services which ensures that care is planned around the whole family, not just the individual child/young person, and in which all the family members are recognized as care recipients”

9	Rakhmawati Nurhidayah Adistie (2020) Family-centered care of tuberculosis prevention in children: a concept analysis.	Walker and Avant's concept analysis.	To clarify the FCC concept related to TB prevention in children.	Epistemological– (partially mature) Pragmatical– (immature) Linguistical– (partially mature) Logical– (partially mature) Overall – partially mature	'a way of families' caring for their children to prevent the development of TB within the household or close contact through involvement, participation, and negotiation of families'
10	Larocque, Peterson, Squires, Mason-Ward, Mayhew & Harrison (2021) Family-centred care in the Neonatal Intensive Care Unit: A concept analysis and literature review.	Rodger's evolutionary concept analysis.	To clarify the meaning of FCC in the NICU to inform future research.	Epistemological– (partially mature) Pragmatical– (partially mature) Linguistical– (partially mature) Logical– (partially mature) Overall – partially mature	'FCC is a philosophy of care rather than a model and it is necessary to adapt FCC in various settings to implement its tenets. However, in the process of doing so, FCC in specific contexts becomes a unique concept. Thus, FCC in the NICU and FCC in other settings are conceptually different and have unique antecedents and attributes.
11	Seniwati, Rustina, Nurhaeni & Wanda (2023) Patient and family-centered care for children: A concept analysis.	Walker and Avant's concept analysis.	To clarify the concept of patient and FCC for children.	Epistemological– (partially mature) Pragmatical– (partially mature) Linguistical– (partially mature) Logical– (partially mature) Overall – partially mature	No definition provided but recommend modifying existing instruments or creating new tools that comprehensively represent all attributes'
12	Wilson (2023) Concept analysis of Family-Centered Care in childhood cancer: An evolutionary approach.	Rodgers' evolutionary method.	To further develop the concept of FCC in childhood cancer.	Epistemological– (mature) Pragmatical– (mature) Linguistical– (mature) Logical– (mature) Overall – mature	'FCC in childhood cancer is a contextual, customized approach to the care of families who have a child diagnosed with cancer that involves interdisciplinary as well as family collaboration, communication that addresses family information needs and fosters trust, and that acknowledges the ripple effect of the diagnosis on functioning of the family as a system as well as individual members'

FCC: family centred care, NICU: neonatal intensive care. TB: tuberculosis