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Family-centered Care

Parents' and Staff Perceptions of Parental Needs During a Child's Hospital Admission: An Australian Study

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ABSTRACT

Purpose: This study aimed to identify parents' and staff perceptions of parents' needs during a hospital admission and relationships between needs, socio-demographic and clinical variables.
Design and Methods: A cross-sectional descriptive design. Forty-six parents whose child received care and 17 staff who worked within a paediatric ward at a secondary hospital in Western Australia completed the Needs of Parents' Questionnaire in 2016.
Results: Parent and staff perceptions of the importance of needs were congruent but differences arose between parents and staff on whether these needs were met and needed. Parents were more likely to rate needs as less important, more met and more needed than staff members. Demographic characteristics significantly influenced parents' and staff perceptions of parents' needs in hospital.
Conclusions: Staff need to acknowledge that the parent and child's hospital trajectory and demographical characteristics can influence the parent and child's needs in hospital. For family centred healthcare delivery to be effective, care delivery needs to be aligned to what parents and children state their needs are at that time.
Practice Implications: This study has highlighted that future international collaborative research networks are needed to critique the concepts and clinical implications of FCC from a broader lens and recipients, deliverers and providers of healthcare need to be cognisance of contemporary FCC literature.

Introduction

Family centred care (FCC), family integrated care (FIC) or family delivered care (FDC) is a philosophy of care encompassing all family members as being central to the care of an individual (Banerjee, Aloysius, Platonos, & Deierl, 2018; Christian, 2016; Foster, Whitehead, & Maybee, 2016). Person centred care (PCC) (Insitute for Patient and Family Centred Care, 2017) and child centred care (CCC) (Carter, Bray, Dickinson, Edwards, & Ford, 2014; Coyne, Hallstrom, & Soderback, 2016; Dickinson, Wrapson, & Water, 2014) implies the care is centred on that person or child. The core concepts of FCC include dignity and respect, information sharing, participation and collaboration to enhance health outcomes, and improved experiences of cares (Butler, Copnell, & Willetts, 2013; Insitute for Patient and Family Centred Care, 2017; Lambert, Glacken, & McCarron, 2010; Randall, Munns, & Shields, 2013). An ongoing debate continues on the benefits, deficits, definition, concepts, rationale, interpretation, outcomes and type of approach to direct healthcare services (Christian, 2013a, 2013b, 2016; Foster, 2015; Tallon, Kendall, & Snider, 2015; Turchi et al., 2014; Uniacke, Browne, & Shields, 2018). In addition, healthcare settings are diverse and many drivers, including policy and resources influence the availability and delivery of healthcare services (Arabiat & Altamimi, 2013; Feeg et al., 2016; Foster, Whitehead, Maybee, & Cullens, 2013; Gill, Leslie, Grech, & Latour, 2013; The Office of the Children's Commissioner, 2011). The literature states that demography (Christian, 2013a, 2013b; Curley, Hunsberger, & Harris, 2013; Lambert et al., 2010), socio-political factors and research influence the way we care for children, parents and families globally (Foster et al., 2013; King, Desmarais, Lindsay, Piérart, & Tétreault, 2015; Randall et al., 2013; Walker-Vischer, Hill, & Mendez, 2015).

FCC delivery has been measured by the staff and parents' perceptions of healthcare needs in hospital being important, met and needed (Curley et al., 2013; Foster et al., 2016; Latour et al., 2011). A need is defined as a situation in which someone must do or have something that is needed in order for that person to succeed, survive or feel satisfied (Foster & Whitehead, 2017a; Maslow, 1943a, 1943b). A healthcare

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need can be a motivating force that compels action for satisfaction to be experienced whereas a need perceived as important and not met can install dissatisfaction (Curtis, Foster, Mitchell, & Van, 2016; Romaniuk, O'Mara, & Akhtar-Danesh, 2014; Smith, Swallow, & Coyne, 2015).

Within a multicultural society, the socio-political landscape and demography of populations are constantly mobile so for a philosophy of care to be internationally accepted and effective it needs to be fluidic and able to capture the lived needs and expectations of diverse populations as they occur (Christian, 2013a; Curtis et al., 2016; King et al., 2015; Silva et al., 2015). This study will examine the relationship between the staff and parents' perception of parents' needs within one Australian hospital and discuss these results in the context of the international literature generated by use of the Needs of Parents' Questionnaire (NPQ) (Bragadottir, 1998; Ferreira, Melo, Reis, & Mello, 2010; Foster & Whitehead, 2017c; Kristjansdottir, 1991, 1995; Shields, Hunter, & Hall, 2004; Shields & Kristensson-Hallstrom, 2004; Shields, Kristensson-Hallstrom, & O'Callaghan, 2003; Shields, Young, & McCann, 2008; Soderback & Christensson, 2008) (Table 1).

Method

Aim

To describe and examine the relationship between the staff and parents' perception of parents' needs within one Australian hospital.

Design

A cross-sectional descriptive design was used to determine the level of importance, need met and independence staff and parents reported in the domains trust, to be trusted, information, support, resources and family.

Participants

The study was conducted within one paediatric ward in Australia that aims to practice FCC as stated in the hospital philosophy. Inclusion criteria included parents resident with a child in the ward, staff who provided care to a child in the ward, basic command of the English language and signed consent. The sample consisted of 46 parents and 17 staff recruited using a convenience sampling method.

Data Collection

All participants were given an information sheet, consent form and a paper version or electronic device to complete the NPQ. Completed consent forms were collected by the research assistant. The 37-bed paediatric ward provides a wide range of specialist healthcare services to children between 0 and 16 years of age.

Table 1
Needs of Parents' Questionnaire Studies.

Author, year, country	Design & method	Participants	Data collection
Kristjansdottir (1991), United States of America.	Descriptive exploratory study, 2 hospitals, United States of America, qualitative design.	Convenience sample of 5 parents of hospitalized 2 to 6 year children and purposive sampling of 6 paediatric staff.	Interviews
Aim: To identify areas of needs among parents of 2 to 6 year old children who are hospitalized.			
Kristjansdottir (1995), Iceland.	Cross-sectional descriptive exploratory study, 1 paediatric state hospital, Iceland, mixed methods.	Convenience sample of 34 parents (22 mothers, 12 fathers) whose 2–6 year old child was admitted for 2 days or longer.	NPQ, 43 needs, 3 subscales, 6 categories, Cronbach's alpha 0.91–0.95, interviews, DD
Aim: To identify the importance of the various needs of parents of hospitalized children and how they conform to what has been observed by professionals and documented in the literature.			
Bragadottir (1998), Iceland.	Cross-sectional descriptive exploratory study, 4 paediatric units, 3 hospitals, 1997, Iceland, quantitative design.	Convenience sample of 29 parents (27 mothers, 2 fathers) whose 2–12 year old child was admitted for 2 days or longer.	NPQ, 43 needs, 3 subscales, 6 categories, Cronbach's alpha > 0.93, DD
Aim: To identify the extent to which parents of 2 to 12 year old hospitalized children perceive their needs to be important, met and needed in hospital.			
Shields et al. (2003), Sweden.	Cross-sectional descriptive exploratory study, 1 hospital, Sweden, quantitative design.	Convenience sample of 113 parents (94 mothers, 18 fathers, 1 other) whose 0–18 year old child was admitted and 132 staff.	NPQ, 51 needs, 3 subscales, 6 categories, Cronbach's alpha 0.92–0.96 parent and staff NPQ, DD
Shields et al. (2004), Sweden.			
Aim: To examine the differences between the perceptions of the needs of parents of hospitalized children held by staff and parents in a paediatric hospital in Sweden.			
Aim: To examine the influence of demographic characteristics on the perceived needs of parents and staff of admitted children in a paediatric hospital in Sweden.			
Shields et al. (2004), England.	Cross-sectional descriptive exploratory study, 1 hospital, 3 sites, England, quantitative design.	Convenience sample of 85 parents (77 mothers, 6 fathers, 2 other) whose 0–16 year old child was admitted and 75 staff.	NPQ, 51 needs, 3 subscales, 6 categories, Cronbach's alpha 0.92–0.96 parent and staff NPQ, DD
Aim: To examine the differences between the perceptions of the needs of parents of hospitalized children held by staff and parents in the north-east of England.			
Shields et al. (2008), Australia.	Cross-sectional descriptive exploratory study, 1 hospital, numerous units, Australia, quantitative design.	Convenience sample of 130 parents (98 mothers, 21 fathers, 2 other) whose 0–18 year old child was admitted and 79 staff	NPQ, 51 needs, 3 subscales, 6 categories, Cronbach's alpha 0.92–0.96 parent and staff NPQ, DD
Aim: To examine the differences between the perceptions of the needs of parents of hospitalized children held by staff and parents in an Australian setting.			
Shields et al. (2008), Africa.	Cross-sectional descriptive exploratory study, 1 hospital, 3 units, Mozambique, 2002, mixed methods.	Random selection of 100 family caregivers (89 mothers, 11 grandmothers/sisters, 1 father) whose 0–7 year old child was admitted	Modified NPQ, 33 items, 2 subscales, 7 categories, interview, DD
Aim: To articulate Mozambican family caregiver's expressed needs, expectations and experiences of hospital care and hospital staff at the Central Hospital of Maputo.			
Ferreira et al. (2010), Portugal.	Cross-sectional descriptive exploratory study, 4 hospitals, numerous units, Portugal, mixed methods.	Sequential random sample of 870 parents (731 mothers, 130 fathers, 7 other) whose 0–18 year old child was admitted for 2 days or longer and purposive sampling of 210 parents	NPQ, 51 needs, 3 subscales, 6 categories, Cronbach's alpha 0.91–0.95, interviews, DD
Aim: To describe the procedures following the validation and reliability analysis of the Portuguese version of the NPQ in the context of paediatric hospitalization in Portugal.			
Foster and Whitehead, (2017c), New Zealand.	Cross-sectional descriptive exploratory study, 1 hospital, 1 unit, New Zealand, 2011, quantitative design.	Convenience sample of 104 parents (86 mothers, 18 fathers) whose 0–18 year old child was admitted and 88 staff	NPQ, 51 needs, 3 subscales, 6 categories, Cronbach's alpha 0.91–0.96 parent and staff NPQ, DD
Aim: To examine the differences between the perceptions of the needs of parents of hospitalized children held by staff and parents in a New Zealand paediatric high dependency setting.			

DD demographic data, NPQ Needs of Parents' Questionnaire.

Table 2
Parent and Staff NPQ Responses: Trust.

Importance score: Important (I) or Not Important (NI), Fulfilment score: Fully Met (FM), Seldom Met (SM) or Not Met (NM), Independence score: Yes (Y) or No (N)										
Needs statements: parent (P), staff (S)	I	NI	*p*	FM	SM	NM	*p*	Y	N	*p*
	n (%)	*n* (%)		*n* (%)	*n* (%)	*n* (%)		*n* (%)	*n* (%)	
4 To be sure that although am not present,	P 46 (100%)	P 0		P 42 (92%)	P 4 (8%)	P 0		P 45 (98%)	P 1 (2%)	
my child will get the best available nursing care	S 17 (100%)	S 0	a	S 15 (88%)	S 2 (12%)	S 0	0.48	S 13 (76%)	S 4 (24%)	**0.00**
32 To be able to trust that although I am not present,	P 46 (100%)	P 0		P 40 (87%)	P 6 (13%)	P 0		P 44 (96%)	P 2 (4%)	
my child will get the best available medical care	S 17 (100%)	S 0	a	S 14 (83%)	S 3 (17%)	S 0	0.92	S 14 (83%)	S 3 (17%)	**0.00**
Category A	Importance		*p*	Fulfilment			*p*	Independence		*p*
Trust Mean Score (rank)	P 2.00 (1st)	S 2.00 (1st)	a	P 2.87 (1st)	S 2.85 (1st)		0.89	P 1.01 (6th)	S 1.21 (4th)	**0.00**

Bold indicates significant difference between parent and staff responses.

Instrument

The NPQ is a 51 statement tool that measures the psychosocial, emotional and physical needs of parents in hospital from the parents' and staff perspective in six domains: trust (A), to be trusted (B), information (C), support (D), resources (E) and family (F) (Kristjansdottir, 1991; Shields et al., 2003) and explores how important each is to the participant in relation to importance, whether the need has been met (fulfilment) and whether more support is required (independence). Importance and fulfilment are scored on a two - three point Likert scale and the independence score a yes or no response. In this study the level of importance, fulfilment and independence were determined by the score for 'fully met' being 3; 'important', 'to some extent met' and 'no' being 2 and 'not important', 'not at all met' and 'yes' being 1 where a statistically significant difference was noted if $p < 0.05$. The Cronbach's Alpha reliability score for this study and other studies ranged from 0.91 to 0.96 (Ferreira et al., 2010; Foster, 2013; Foster & Whitehead, 2017b; Shields et al., 2004; Shields et al., 2003). Demographic details were collected at the end of the NPQ.

Ethical Considerations

Hospital and university ethics approval were granted where the principles of informed consent, respect, beneficence, integrity, confidentiality and justice were upheld.

Data Analysis

SPSS (Version 24.0) was used to perform descriptive and inferential statistical analyses and followed the same analyses as noted in the Foster and Whitehead (2017b) study. Power calculations determined that for a power of 80% a sample of 45 for parent and staff samples each would be needed to detect a 10% difference (Pallant, 2011). During data collection fewer responses were obtained which may have increased the probability of a Type-II error (McCormick, Saleedo, Peck, & Wheeler, 2017).

Results

Forty-six of 48 parents (96%) and 17 of 51 staff (33%) completed the NPQ in 2016. The majority of parents in the study were female ($n = 40$, 87%), married ($n = 41$, 90%) and whose child had an unplanned ($n = 42$, 91%) admission of between 1 to 7 days ($n = 47$, 100%). The majority of staff in the study were female ($n = 15$, 88%), registered nurses ($n = 16$, 95%) with a postgraduate ($n = 5$, 30%) or specialist paediatric qualification ($n = 6$, 35%) in a senior role ($n = 4$, 24%) whom were older than 40 years of age ($n = 8$, 47%).

The Needs of Parents' Questionnaire

The staff and parents' responses to each NPQ need, mean and category scores were calculated and are presented in the appropriate domain (Tables 2–7).

Comparison of Parent and Staff Data

The mean importance values for parents was 97.83 (SD 4.85) and 99.00 (SD 4.24) for staff; the mean fulfilment values for parents were 135.93 (SD 16.25) and 125.24 (SD 7.99) for staff and the mean independence values for parents was 54.41 (SD 17.59) and 63.71 (SD 14.21) for staff. Overall the parents perceived the needs as less important, more met and more needed than staff.

Differences of the Importance Scores Between Parents and Staff Responses

For the most part parents and staff agreed on the importance of parental needs. Similar responses for statements across all 6 domains, 100% agreement on 12 statements for trust, to be trusted, information, support and resources and 15 statistically significant differences between responses were reported (Tables 2–7). Parents rated a need as more important than staff on five statements ($p < 0.05$) (Tables 4, 5, 7). The importance category rank order for parents (A, C, F, E, B, D) and staff (A, C, E, B, D, F) were congruent for trust and information yet dissimilar for the other domains.

Table 3
Parent and Staff NPQ Responses: to be trusted.

Importance score: Important (I) or Not Important (NI), Fulfilment score: Fully Met (FM), Seldom Met (SM) or Not Met (NM), Independence score: Yes (Y) or No (N)										
Needs statements: parent (P), Staff (S)	I	NI	*p*	FM	SM	NM	*p*	Y	N	*p*
	n (%)	*n* (%)		*n* (%)	*n* (%)	*n* (%)		*n* (%)	*n* (%)	
18 To feel that I am trusted to be able to care for my	P 44 (96%)	P 2 (4%)		P 40 (87%)	P 6 (13%)	P 0		P 38 (82%)	P 8 (18%)	
child in hospital	S 17 (100%)	S 0	0.08	S 11 (65%)	S 6 (35%)	S 0	**0.00**	S 12 (70%)	S 5 (30%)	0.06
26 To feel that I am not blamed for my child's illness	P 40 (88%)	P 6 (12%)		P 39 (85%)	P 5 (11%)	P 2 (4%)		P 36 (78%)	P 10 (22%)	
	S 15 (88%)	S 2 (12%)	0.79	S 16 (94%)	S 1 (6%)	S 0	**0.02**	S 10 (59%)	S 7 (41%)	**0.02**
34 That nurses contact and consult me about the care	P 46 (100%)	P 0		P 40 (87%)	P 6 (13%)	P 0		P 44 (94%)	P 2 (6%)	
that is needed for the nursing care of my child	S 17 (100%)	S 0	a	S 11 (65%)	S 6 (35%)	S 0	**0.02**	S 11 (65%)	S 6 (35%)	**0.00**
40 To feel that I am needed in the ward/ unit	P 37 (81%)	P 9 (19%)		P 32 (70%)	P 11 (24%)	P 2 (6%)		P 32 (69%)	P 14 (31%)	
	S 15 (88%)	S 2 (12%)	0.13	S 14 (82%)	S 3 (18%)	S 0	**0.02**	S 10 (59%)	S 7 (41%)	0.19
Category B	Importance		*p*	Fulfilment			*p*	Independence		*p*
Trusted Mean Score (rank)	P 1.91 (5th)	S 1.94 (4th)	0.36	P 2.78 (2nd)	S 2.74 (2nd)		0.37	P 1.18 (1st)	S 1.37 (1st)	**0.00**

Bold indicates significant difference between parent and staff responses.

Table 4
Parent and Staff NPQ Responses: information.

Importance score: Important (I) or Not Important (NI), Fulfilment score: Fully Met (FM), Seldom Met (SM) or Not Met (NM), Independence score: Yes (Y) or No (N)										
Needs statements: parent (P), Staff (S)	I	NI	*p*	FM	SM	NM	*p*	Y	N	*p*
	n (%)	*n* (%)		*n* (%)	*n* (%)	*n* (%)		*n* (%)	*n* (%)	
6 To be able to see a social worker to get information about financial assistance to help ease problems	P 29 (62%)	P 17 (38%)		P 22 (48%)	P 11 (26%)	P 11 (26%)		P 32 (69%)	P 14 (31%)	
	S 16 (94%)	S 1 (6%)	**0.00**	S 7 (40%)	S 9 (53%)	S 1 (7%)	0.23	S 14 (83%)	S 3 (17%)	0.08
8 That I receive written information about my child's health status so I can review it later	P 45 (96%)	P 1 (4%)		P 28 (61%)	P 15 (33%)	P 3 (6%)		P 45 (96%)	P 1 (4%)	
	S 17 (100%)	S 0	0.22	S 6 (35%)	S 11 (65%)	S 0	0.16	S 16 (94%)	S 1 (6%)	0.14
15 That I be informed about all known health outcomes for my child	P 46 (100%)	P 0		P 40 (87%)	P 6 (13%)	P 0		P 45 (96%)	P 1 (4%)	
	S 17 (100%)	S 0	a	S 9 (53%)	S 8 (47%)	S 0	**0.00**	S 16 (94%)	S 1 (6%)	0.15
19 That I be informed about all treatment that my child will receive	P 45 (96%)	P 1 (4%)	0.22	P 43 (94%)	P 3 (7%)	P 0		P 45 (95%)	P 1 (5%)	
	S 17 (100%)	S 0		S 14 (83%)	S 3 (17%)	S 0	**0.01**	S 15 (88%)	S 2 (12%)	**0.01**
24 To learn and be informed about how illness affects children's growth and development	P 45 (96%)	P 1 (4%)		P 35 (76%)	P 11 (24%)	P 0		P 42 (90%)	P 4 (10%)	
	S 17 (100%)	S 0	0.22	S 2 (12%)	S 15 (88%)	S 0	**0.03**	S 16 (94%)	S 1 (6%)	0.46
29 That I be prepared for the day of discharge and any change in that date	P 46 (100%)	P 0		P 38 (83%)	P 8 (17%)	P 0		P 44 (93%)	P 2 (7%)	
	S 17 (100%)	S 0	a	S 10 (59%)	S 7 (41%)	S 0	**0.00**	S 12 (70%)	S 5 (30%)	**0.00**
31 That I be informed as soon as possible about results from tests done	P 46 (100%)	P 0		P 37 (81%)	P 7 (15%)	P 2 (4%)		P 45 (96%)	P 1 (4%)	
	S 17 (100%)	S 0	a	S 4 (24%)	S 13 (76%)	S 0	**0.00**	S 15 (88%)	S 2 (12%)	**0.00**
38 That I get exact information about my child's condition	P 46 (100%)	P 0		P 40 (87%)	P 4 (9%)	P 2 (4%)		P 44 (94%)	P 2 (6%)	
	S 17 (100%)	S 0	a	S 11 (65%)	S 6 (35%)	S 0	0.32	S 14 (82%)	S 3 (18%)	**0.00**
43 To be told about everything that is being done to or for my child and why	P 104 (100%)	P 0		P 41 (89%)	P 5 (11%)	P 0		P 44 (94%)	P 2 (6%)	
	S 17 (100%)	S 0	a	S 14 (83%)	S 3 (17%)	S 0	0.17	S 12 (70%)	S 5 (30%)	**0.00**
49 That one person (a nurse) coordinates the services and flow of information we get in hospital	P 43 (92%)	P 3 (8%)		P 32 (70%)	P 13 (28%)	P 1 (2%)		P 40 (86%)	P 5 (14%)	
	S 14 (82%)	S 3 (18%)	**0.01**	S 2 (12%)	S 9 (53%)	S 6 (35%)	0.28	S 10 (58%)	S 7 (42%)	**0.00**
Category C	Importance		*p*	Fulfilment			*p*	Independence		*p*
Information Mean Score (rank)	P 1.95 (2nd)	S 1.98 (2nd)	0.46	P 2.71 (3rd)	S 2.41 (4th)		0.16	P 1.04 (5th)	S 1.18 (6th)	0.09

Bold indicates significant difference between parent and staff responses.

Differences of the Fulfilment Scores Between Parents and Staff Responses

A greater proportion of parents than staff thought 42 needs were being fully met. Significant differences were noted in 20 of 24 needs where parents perceived the need as more fully met than staff, 19 needs showed congruence in perception of need not being met and four needs showed parent reports of a need not being met ($p < 0.05$) (Tables 3, 5, 7). The fulfilment category rank order for parents (A, B, C, E, F, D) and staff (A, B, E, C, D, F) were congruent for trust and to be trusted yet dissimilar for the other domains.

Differences of the Independence Scores Between Parents and Staff Responses

The independence score showed that more parents than staff perceived help was needed to meet 38 of the 51 needs and a significant difference was noted on 29 needs across all domains (Tables 2–7). More staff than parents perceived that parents required assistance to meet 12 needs where five needs showed a significant difference for the domain information, support and resources (Tables 5–7). A significant difference in the important, fulfilment and independence scores for four

Table 5
Parent and Staff NPQ Responses: support and guidance.

Importance score: Important (I) or Not Important (NI), Fulfilment score: Fully Met (FM), Seldom Met (SM) or Not Met (NM), Independence score: Yes (Y) or No (N)										
Needs statements: parent (P), Staff (S)	I	NI	*p*	FM	SM	NM	*p*	Y	N	*p*
	n (%)	*n* (%)		*n* (%)	*n* (%)	*n* (%)		*n* (%)	*n* (%)	
2 To have a planned meeting with other parents to share and discuss experience of my child's hospitalization	P 31 (66%)	P 15 (34%)		P 18 (39%)	P 21 (46%)	P 7 (15%)		P 26 (56%)	P 20 (44%)	
	S 9 (53%)	S 8 (47%)	0.15	S 0	S 8 (47%)	S 9 (53%)	0.28	S 12 (70%)	S 5 (30%)	0.15
3 That staff encourage parents to ask questions and seek answers to them	P 46 (100%)	P 0		P 43 (94%)	P 3 (6%)	P 0		P 44 (94%)	P 2 (6%)	
	S 17 (100%)	S 0	a	S 11 (65%)	S 6 (35%)	S 0	**0.00**	S 14 (82%)	S 3 (18%)	
7 To be able to meet with parents with similar experiences of an ill child	P 29 (63%)	P 17 (37%)		P 9 (20%)	P 17 (37%)	P 20 (43%)		P 24 (52%)	P 22 (48%)	
	S 13 (77%)	S 4 (23%)	**0.02**	S 1 (6%)	S 11 (65%)	S 5 (29%)	**0.03**	S 17 (100%)	S 0	**0.02**
9 To be able to ask nurses and doctors about how to explain the illness and/or tests to my child	P 43 (92%)	P 3 (8%)		P 36 (78%)	P 9 (20%)	P 1 (2%)		P 43 (91%)	P 3 (9%)	
	S 17 (100%)	S 0	**0.04**	S 9 (53%)	S 8 (47%)	S 0	0.36	S 16 (94%)	S 1 (6%)	**0.04**
11 To have a person in the unit (a nurse or a doctor) especially assigned to respond to parents' needs	P 38 (82%)	P 8 (18%)		P 28 (61%)	P 17 (37%)	P 1 (2%)		P 35 (75%)	P 10 (25%)	
	S 14 (83%)	S 3 (17%)	0.96	S 3 (18%)	S 9 (53%)	S 5 (29%)	0.84	S 15 (88%)	S 2 (12%)	0.96
13 That I get advice about the care of my child in preparation for my child's discharge	P 45 (96%)	P 1 (4%)		P 38 (83%)	P 5 (11%)	P 3 (6%)		P 45 (95%)	P 1 (5%)	
	S 17 (100%)	S 0	0.22	S 15 (88%)	S 2 (12%)	S 0	0.54	S 15 (88%)	S 2 (12%)	0.22
16 To be encouraged by staff to come and stay with my child	P 45 (96%)	P 1 (4%)		P 40 (87%)	P 5 (11%)	P 1 (2%)		P 41 (87%)	P 5 (13%)	
	S 17 (100%)	S 0	0.22	S 14 (83%)	S 3 (17%)	S 0	0.77	S 13 (76%)	S 4 (24%)	0.22
17 That a nurse assists me to recognize my own needs, e.g. meals, sleep	P 41 (87%)	P 5 (13%)		P 20 (44%)	P 22 (48%)	P 4 (8%)		P 34 (73%)	P 12 (27%)	
	S 16 (94%)	S 1 (6%)	0.22	S 4 (23%)	S 13 (77%)	S 0	**0.01**	S 13 (76%)	S 4 (24%)	0.22
36 To know that I can contact the ward/ unit after my child has been discharged	P 45 (96%)	P 1 (4%)		P 31 (67%)	P 9 (20%)	P 6 (13%)		P 43 (90%)	P 3 (10%)	
	S 15 (88%)	S 2 (12%)	**0.00**	S 12 (70%)	S 5 (30%)	S 0	**0.03**	S 12 (70%)	S 5 (30%)	**0.00**
42 That I get assistance to recognize the needs of my child	P 45 (96%)	P 1 (4%)		P 35 (76%)	P 8 (17%)	P 3 (7%)		P 41 (87%)	P 5 (13%)	
	S 17 (100%)	S 0	0.22	S 8 (48%)	S 9 (52%)	S 0	0.99	S 12 (70%)	S 5 (30%)	0.22
44 That I can continue to feel hopeful about my child's condition	P 43 (92%)	P 3 (8%)		P 40 (87%)	P 6 (13%)	P 0		P 37 (79%)	P 9 (21%)	
	S 17 (100%)	S 0	**0.04**	S 13 (77%)	S 4 (23%)	S 0	0.61	S 14 (82%)	S 3 (18%)	**0.04**
50 That I do not feel hopeless	P 41 (87%)	P 5 (13%)		P 36 (78%)	P 8 (17%)	P 2 (5%)		P 35 (75%)	P 11 (25%)	
	S 17 (100%)	S 0	**0.00**	S 12 (70%)	S 5 (30%)	S 0	0.80	S 12 (70%)	S 5 (30%)	**0.00**
Category D	Importance		*p*	Fulfilment			*p*	Independence		*p*
Support Mean Score (rank)	P 1.89 (6th)	S 1.91 (5th)	0.09	P 2.57 (6th)	S 2.41 (5th)		0.11	P 1.15 (3rd)	S 1.19 (5th)	0.81

Bold indicates significant difference between parent and staff responses.

Table 6
Parent and Staff NPQ Responses: human and physical resources.

Importance score: Important (I) or Not Important (NI), Fulfilment score: Fully Met (FM), Seldom Met (SM) or Not Met (NM), Independence score: Yes (Y) or No (N)										
Needs statements: parent (P), Staff (S)	I	NI	*p*	FM	SM	NM	*p*	Y	N	*p*
	n (%)	*n* (%)		*n* (%)	*n* (%)	*n* (%)		*n* (%)	*n* (%)	
1 To have a special place in the unit where parents can	P 37 (79%)	P 9 (21%)		P 24 (52%)	P 21 (46%)	P 1 (2%)		P 34 (73%)	P 12 (27%)	
be by themselves	S 15 (88%)	S 2 (12%)	0.13	S 3 (17%)	S 12 (70%)	S 2 (13%)		S 13 (76%)	S 4 (24%)	0.68
5 That I get sufficient rest or adequate sleep	P 46 (100%)	P 0		P 32 (70%)	P 14 (30%)	P 0		P 38 (82%)	P 8 (18%)	
	S 17 (100%)	S 0	a	S 3 (18%)	S 14 (82%)	S 0	**0.03**	S 14 (82%)	S 3 (18%)	0.96
10 That there is flexibility in the work of the unit	P 40 (85%)	P 6 (15%)		P 32 (70%)	P 13 (28%)	P 1 (2%)		P 35 (75%)	P 11 (25%)	
according to parents' needs	S 17 (100%)	S 0	**0.00**	S 4 (24%)	S 13 (76%)	S 0	0.17	S 15 (88%)	S 2 (12%)	**0.02**
12 That I get an opportunity to speak privately with a	P 40 (85%)	P 6 (15%)		P 21 (46%)	P 22 (48%)	P 3 (6%)		P 37 (79%)	P 9 (21%)	
doctor or a nurse about my own feelings or worries	S 17 (100%)	S 0	**0.00**	S 9 (53%)	S 8 (47%)	S 0	0.35	S 14 (82%)	S 2 (18%)	0.73
14 That I be permitted to make the final decision about	P 46 (100%)	P 0		P 38 (83%)	P 8 (17%)	P 0		P 44 (94%)	P 2 (6%)	
the treatment my child will receive	S 16 (94%)	S 1 (6%)	0.73	S 8 (47%)	S 9 (53%)	S 0	**0.00**	S 14 (82%)	S 3 (18%)	**0.00**
21 That I have a place to sleep in the hospital	P 46 (100%)	P 0		P 44 (96%)	P 2 (4%)	P 0		P 43 (92%)	P 3 (8%)	
	S 17 (100%)	S 0	a	S 17 (100%)	S 0	S 0	0.08	S 11 (65%)	S 6 (35%)	**0.00**
33 That nurses recognize and understand the feelings	P 44 (94%)	P 2 (6%)		P 37 (80%)	P 9 (20%)	P 0		P 41 (87%)	P 5 (13%)	
of parents	S 17 (100%)	S 0	0.07	S 10 (59%)	S 7 (41%)	S 0	**0.00**	S 13 (76%)	S 4 (24%)	**0.02**
35 To feel that I am important in contributing to my	P 44 (94%)	P 2 (6%)		P 38 (83%)	P 8 (17%)	P 0		P 39 (83%)	P 7 (17%)	
child's wellbeing	S 17 (100%)	S 0	0.08	S 14 (82%)	S 3 (18%)	S 0	0.53	S 10 (59%)	S 7 (41%)	**0.00**
37 That I get assistance and support to recognize and	P 41 (87%)	P 5 (13%)		P 29 (63%)	P 10 (22%)	P 6 (15%)		P 37 (79%)	P 9 (21%)	
understand my own needs, e.g. anxiety, tiredness	S 16 (94%)	S 1 (6%)	0.22	S 5 (30%)	S 12 (70%)	S 0	**0.01**	S 11 (65%)	S 6 (35%)	**0.03**
39 That I feel less anxious	P 41 (87%)	P 5 (13%)		P 32 (70%)	P 12 (26%)	P 1 (4%)		P 33 (69%)	P 13 (31%)	
	S 17 (100%)	S 0	**0.00**	S 6 (35%)	S 11 (65%)	S 0	**0.02**	S 12 (70%)	S 5 (30%)	0.86
41 To be able to 'room in' with my child	P 46 (100%)	P 0		P 43 (94%)	P 3 (6%)	P 0		P 43 (93%)	P 2 (7%)	
	S 17 (100%)	S 0	a	S 16 (94%)	S 1 (6%)	S 0	0.41	S 11 (65%)	S 6 (35%)	**0.00**
45 That I can have meals with my child on the	P 42 (90%)	P 4 (10%)		P 35 (76%)	P 7 (15%)	P 4 (9%)		P 41 (87%)	P 5 (13%)	
ward/unit	S 14 (83%)	S 3 (17%)	0.29	S 6 (35%)	S 9 (53%)	S 2 (12%)	0.93	S 14 (82%)	S 3 (18%)	0.26
46 That there are bath and shower facilities for parents	P 41 (87%)	P 5 (13%)		P 38 (83%)	P 7 (15%)	P 1 (2%)		P 42 (90%)	P 4 (10%)	
	S 16 (95%)	S 1 (5%)	0.16	S 14 (82%)	S 3 (18%)	S 0	0.70	S 11 (65%)	S 6 (35%)	**0.00**
47 To know that my child will get proper schooling so	P 40 (85%)	P 6 (15%)		P 29 (63%)	P 13 (28%)	P 4 (9%)		P 34 (73%)	P 12 (27%)	
he/she will not fall behind in development	S 16 (94%)	S 1 (6%)	0.10	S 7 (41%)	S 9 (53%)	S 1 (6%)	0.41	S 10 (59%)	S 7 (41%)	0.07
Category E	Importance		*p*	Fulfilment			*p*	Independence		*p*
Human Resources Mean Score (rank)	P 1.92 (4th)	S 1.96 (3rd)	0.14	P 2.68 (4th)	S 2.48 (3rd)		0.06	P 1.13 (4th)	S 1.27 (3rd)	**0.04**

Bold indicates significant difference between parent and staff responses.

needs and fulfilment and independence scores for 14 needs were noted across five domains (Tables 3–7). The independence category rank order for parents (B, F, D, E, C, A) and staff (B, F, E, A, D, C) were congruent for to be trusted and family yet dissimilar for the other domains.

Differences of the Domain Scores Between Parents and Staff Responses

Parents perceived the need for trust as similar, better met and more needed in comparison to staff (Table 2). Parents perceived the need to be trusted, information, support and resources as less important, better met and more needed and family needs as more important, better met and more needed in comparison to staff (Tables 2–7). A significant difference was noted in the parent and staff perceptions of these needs being needed and provided for by the hospital (trust, $p = 0.000$; to be trusted, $p = 0.000$; resources, $p = 0.04$) (Tables 2, 3, 6).

Socio-demographic Factors

The variables age (parent and child), education (parent), number of admissions, severity of illness, staff as parents and staff ethnicity that showed an even distribution within each sample were statistically

Table 7
Parent and Staff NPQ Responses: family.

Importance score: Important (I) or Not Important (NI), Fulfilment score: Fully Met (FM), Seldom Met (SM) or Not Met (NM), Independence score: Yes (Y) or No (N)										
Needs statements: parent (P), Staff (S)	I	NI	*p*	FM	SM	NM	*p*	Y	N	*p*
	n (%)	*n* (%)		*n* (%)	*n* (%)	*n* (%)		*n* (%)	*n* (%)	
20 To have a person in the unit especially assigned to	P 46 (100%)	P 0		P 39 (85%)	P 7 (15%)	P 0		P 44 (94%)	P 2 (6%)	
take care of the needs of my child	S 15 (88%)	S 2 (12%)	**0.00**	S 7 (41%)	S 9 (53%)	S 1 (6%)	0.07	S 15 (88%)	S 2 (12%)	**0.04**
22 That a nurse follows up my child after discharge	P 41 (87%)	P 5 (13%)		P 20 (44%)	P 13 (28%)	P 13 (28%)		P 39 (83%)	P 7 (17%)	
	S 11 (65%)	S 6 (35%)	**0.00**	S 0	S 4 (24%)	S 13 (76%)	**0.00**	S 13 (76%)	S 4 (24%)	0.15
23 To be able to participate in the nursing care of my	P 41 (87%)	P 5 (13%)		P 38 (83%)	P 8 (17%)	P 0		P 41 (88%)	P 5 (12%)	
child	S 16 (94%)	S 1 (6%)	0.22	S 9 (53%)	S 8 (47%)	S 0	**0.00**	S 12 (70%)	S 5 (30%)	**0.00**
25 That I can stay with my child 24 h a day if I wish	P 45 (96%)	P 1 (4%)		P 42 (92%)	P 4 (8%)	P 0		P 43 (92%)	P 3 (8%)	
	S 17 (100%)	S 0	0.22	S 16 (94%)	S 1 (6%)	S 0	0.26	S 12 (70%)	S 5 (30%)	**0.00**
27 To be able to do physical care for my child, e.g.	P 42 (90%)	P 4 (10%)		P 37 (80%)	P 8 (18%)	P 1 (2%)		P 40 (85%)	P 6 (15%)	
change nappy, bath, feed, etc	S 17 (100%)	S 0	**0.01**	S 17 (100%)	S 0	S 0	**0.00**	S 9 (53%)	S 7 (47%)	**0.00**
28 That I be able to explain things to my relations,	P 44 (92%)	P 2 (8%)		P 39 (85%)	P 6 (13%)	P 1 (2%)		P 35 (75%)	P 11 (25%)	
friends, and my other child/children	S 15 (88%)	S 2 (12%)	**0.04**	S 7 (41%)	S 9 (53%)	S 1 (6%)	**0.01**	S 10 (59%)	S 7 (41%)	**0.04**
30 That I have time to be with my other child/ children	P 43 (90%)	P 3 (10%)		P 29 (64%)	P 12 (26%)	P 5 (10%)		P 28 (61%)	P 18 (39%)	
	S 17 (100%)	S 0	**0.03**	S 4 (24%)	S 13 (76%)	S 0	**0.02**	S 10 (59%)	S 7 (41%)	0.78
48 That the same nurses take care of my child most of	P 42 (90%)	P 4 (10%)		P 30 (65%)	P 15 (33%)	P 1 (2%)		P 41 (87%)	P 5 (13%)	
the time	S 16 (94%)	S 1 (6%)	0.46	S 2 (12%)	S 15(88%)	S 0	**0.00**	S 11 (65%)	S 6 (35%)	**0.00**
51 That qualified teachers are available to ensure that	P 38 (80%)	P 8 (20%)		P 23 (50%)	P 17 (37%)	P 4 (13%)		P 32 (70%)	P 14 (30%)	
my child's development is maintained	S 14 (82%)	S 3 (18%)	0.32	S 5 (29%)	S 8 (47%)	S 4 (24%)	0.36	S 11 (65%)	S 6 (35%)	0.72
Category F	Importance		*p*	Fulfilment			*p*	Independence		*p*
Family Members Mean Score (rank)	P 1.93 (3rd)	S 1.90 (6th)	0.86	P 2.66 (5th)	S 2.35 (6th)		0.13	P 1.16 (2nd)	S 1.32 (2nd)	0.18

Bold indicates significant difference between parent and staff responses.

analysed to examine for relationships with the NPQ importance, fulfilment independence and category mean scores. There were 236 significant differences between the parents' NPQ responses and variables for 51 needs and 53 significant differences between the staff NPQ responses and variables for 34 needs that covered five domains (B, C, D, E, F). Parents' who held a tertiary qualification placed greater importance on 16 needs in comparison to parents with a high school education (p 0.000–0.049). The former were also more likely to perceive needs as being "met" ($n = 25$) (p 0.000–0.049) and were more independent in relation to whether they perceived the hospital should meet needs ($n = 18$) (p 0.000–0.049). Parents' who were younger than 40 years of age and whose child was under 6 years of age placed greater importance on 23 needs in comparison to parents older than 40 years of age and whose child was 7 years and above (p 0.000–0.047). Parents were also more likely to perceive needs as being "met" ($n = 29$) (p 0.000–0.036) and were more independent in relation to whether they perceived the hospital should meet needs ($n = 21$) (p 0.000–0.047). Staff from Australia placed a greater importance on nine needs in comparison to staff of a different ethnicity (p 0.000–0.011). The former were also more likely to perceive needs as being "not met" ($n = 6$) (p 0.000–0.023) and were more dependent in relation to whether they perceived the hospital should meet needs ($n = 5$) (p 0.000–0.023).

Discussion

In this study the parent and staff importance mean scores (IMS) were similar with staff rating 30 needs as slightly more important than parents. This theme has been reported in other studies in New Zealand (Foster & Whitehead, 2017b) where 38 needs were rated as more important by staff, seven equally important and 14 significant differences were noted ($p < 0.05$). In Australia (Shields et al., 2008) the staff rated 45 needs as more important than parents, five equally important and 17 showed a significant difference, in England (Shields et al., 2004) staff scored 34 needs as more important than parents, 17 equally important and 14 showed a significant difference whereas in Sweden (Shields et al., 2003) 23 needs showed a significant difference when staff reported a need as more important than parents. Studies conducted in Portugal (Ferreira et al., 2010) and Iceland (Kristjansdottir, 1995) reported a lower parent IMS (Portugal P 85.60, Iceland P 79.30). Of interest the need 'to be told about everything that is being done to or for my child and why' was perceived as equally important by parents and/or staff and the needs six, seven and ten that showed a significant difference between parent and staff responses were similar in six studies (Table 1).

In this study the staff and parent fulfilment mean scores (FMS) were significantly different ($p < 0.05$) with staff rating 21 needs as less met than parents which is similar to a New Zealand study (Foster & Whitehead, 2017b) when staff rated 48 needs as less met, none as equally met and 46 significant differences were noted. Alternatively in England (Shields et al., 2004) staff perceived 50 needs as more met than parents, none as equally met and 44 significant differences were evident whereas staff in Sweden (Shields et al., 2003) rated 13 needs as significantly more met than parents and staff in Australia (Shields et al., 2008) rated 42 needs as more met, none as equally met and 20 significant differences were reported. The FMS in Portugal (Ferreira et al., 2010) (P 62.70) and Iceland (Kristjansdottir, 1995) (P 58.50) were rated as lower than other studies yet these results are limited to parent responses. Of interest the need 'that a nurse assists me to recognise my own needs' showed a consistent significant difference between staff and parent responses in the studies with a difference of perception evident over time. Staff rated this need as more met in studies conducted up to 2008 (Shields et al., 2003; Shields et al., 2004; Shields et al., 2008) and less met in studies conducted after 2008 (Foster & Whitehead, 2017b).

The independence mean scores (INMS) was the area that showed the greatest variance within and between studies. In this study the staff and parent INMS were significantly different ($p < 0.05$) with parents rating 40 needs as more needed than staff which is similar to a New Zealand study (Foster & Whitehead, 2017b) when 26 needs were rated as more needed by parents, none as equally met and 14 significant differences were noted. In Portugal (Ferreira et al., 2010) the parent INMS was also high (P 88.7).

Alternatively in England (Shields et al., 2004) staff perceived all of the 51 needs as more needed, none as equally met and 42 significant differences ($p < 0.05$) were noted whereas in Sweden (Shields et al., 2003) 49 significant differences were noted when more staff than parents perceived parents required help. In Australia (Shields et al., 2008) staff rated 51 needs as more needed, none as equally met and 44 significant differences were reported. Of interest eight needs showed a consistent significant difference ($p < 0.05$) in parent-staff responses where more staff perceived these needs as more needed in studies conducted up to 2008 (Shields et al., 2003; Shields et al., 2004; Shields et al., 2008) and less needed in studies conducted after 2008 (Foster & Whitehead, 2017b).

Parents and/or staff perceived trust as the most important category in all the studies and support and guidance as the least important category in the majority of studies (Ferreira et al., 2010; Foster & Whitehead, 2017b; Kristjansdottir, 1995; Shields et al., 2008; Shields & Kristensson-Hallstrom, 2004). This confirms that time, demography and country had minimal influence on the importance placed on trust and support or guidance. The second and third important category was similarly perceived by parents and/or staff as information, to be trusted and family (Ferreira et al., 2010; Foster & Whitehead, 2017b; Kristjansdottir, 1995; Shields et al., 2008; Shields & Kristensson-Hallstrom, 2004).

In this study the parents and staff perceived trust as the most important and met category which is similar to other studies (Foster & Whitehead, 2017b; Shields et al., 2008). In England, despite trust being perceived by staff and parents as the most important category resources were perceived by staff and parents as the most met category (Shields et al., 2004). In Australia, New Zealand and Portugal parents and/or staff perceived to be trusted as the second met category (Ferreira et al., 2010; Foster & Whitehead, 2017b; Shields et al., 2008) with support perceived as the third, fifth and sixth met category (Ferreira et al., 2010; Foster & Whitehead, 2017b; Shields et al., 2004; Shields et al., 2008). The staff and parents independence category scores showed the greatest variance with no consistent relationship evident within or between the studies.

The literature states that staff and parent demography influences healthcare delivery and outcomes (Arabiat & Altamimi, 2013; Foster, Whitehead, & Maybee, 2010; Hakio, Rantanen, Åstedt-Kurki, & Suominen, 2015). In this study 236 significant differences ($p < 0.05$) were evident in the parent staff responses with demography whereas in America, England, Iceland, New Zealand and Sweden 4–111 significant differences were reported with staff and/or parent responses that included up to 46 needs (Bragadottir, 1998; Foster & Whitehead, 2017b; Kristjansdottir, 1991, 1995; Shields et al., 2004; Shields & Kristensson-Hallstrom, 2004; Shields et al., 2003). Of interest the need that 'there be a bath and shower facilities for parents' showed a consistent significant difference in parent and/or staff responses with demography in all of the studies.

This study highlighted that the parents' and staff perceptions of the most and least important and met needs for parents in an Australian hospital were similar to the other studies with a shift in perception and increased influence of demography. A shift being an increased or inverse importance, fulfilment and/or independence score. This raises the question on how FCC can iteratively be aligned and fluidic to meet the mobile needs of children and families when there is ambiguity on the clinical practice implications and responsibilities of staff in promoting partnership, participation, negotiation and care by parent as precursors to FCC (Uniacke et al., 2018). Uniacke et al. (2018) explored the interpretation and clinical implication of FCC as 'family participation', 'child-in-family-context' and 'family as the unit of care' and

recommended that FCC needs a redirection away from the earlier precursors of FCC to a different goal that requires a different justificatory rational at an organisational and individual level (Carlsson, Nygren, & Svedberg, 2018).

Limitations

Despite discussing the results of this study with data on use of the NPQ from 1991 to 2017, a limitation of this study was the lack of published data to fully discuss how staff and parent responses to the NPQ have remained the same or different over time. A secondary analysis of the original data on the use of the NPQ is a recommendation of this study to explore how demography, time and context have influenced parents' and staff perceptions over time. Further limitations of this study include a small sample size from one hospital in a developed country that practiced under a FCC approach. Parents' and staff perceptions of parents' needs in hospital may vary in developing countries with fiscal resources where the need for shelter, food and water supersede the need or expectation to live in and feel included with shared decision making during their child's hospital stay.

Conclusion

This article has highlighted that there is a general shift in the staff and parents' perceptions of FCC and parents' needs in hospital as would be expected in a mobile socio-political landscape. However to explore the core concepts, meaning, rationale and value of FCC from a multicultural perspective I propose an international network of multidisciplinary family and child healthcare experts need to conduct collaborative projects and forums where culture, healthcare structure, determinants of health and policy are critiqued from a multi-tiered perspective. In addition, translation of research needs to include appropriate dissemination of findings to recipients, deliverers and providers of healthcare to maintain authentic engagement with practice, theory, education, policy and research. For FCC healthcare delivery to be effective care needs to align to the importance placed on that need as expressed by that person, child, parent or family.

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Conflict of Interest

None of the authors have a conflict of interest with respect to the authorship and or publication of this article.

Ethical Approval

The appropriate Ethics Committee approved this research project.

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