








RESEARCH ARTICLE

Factors influencing critical care nurses' family engagement practices: An international perspective

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Funding information

British Association of Critical Care Nurses; Froedtert Foundation in the USA; JSPS KAKENHI Grant-in-Aid for Young Scientists in Japan; The Glen Taylor Nursing Institute for Family

Abstract

Background: Family engagement positively impacts patient and family members' experiences of care and health outcomes. While partnering with families denotes best practice in intensive care units (ICUs), its full adoption requires improvement. A better understanding of the factors that influence the implementation of family engagement practices is necessary.

Aim: To investigate the factors that enable or hinder adult ICU nurse-family engagement and to explore potential international variations.

Study Design: Descriptive, cross-sectional survey. Nurses from 10 countries completed the 'Questionnaire on Factors that Influence Family Engagement' (QFIFE), including five open-ended questions. We performed descriptive statistics on quantitative data and content analysis for open-ended questions, and then integrated the findings according to influencing factors and geographical patterns. This was part of a larger qualitative study where 65 nurses participated from adult intensive care units.

Results: Sixty-one nurses completed the questionnaire, making a response rate of 94%. Overall, *patient acuity* (Md = 5.0) and *nurses' attitudes* (Md = 4.6) seemed to be the most influential facilitator, followed by *nurse workflow* (Md = 4.0) and *ICU*

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environment (Md = 3.1) (score 1–6 most influential). The open-ended question data showed a more nuanced picture of the complexity of family engagement in care around these four determinants. Adding a fifth determinant, namely *Families are complex structures that respond uniquely to the ICU and patient*, revealed that difficult family dynamics, miscommunication and family having difficulty in understanding the situation or health literacy, hindered family engagement. Exploring geographical variations, Africa/Middle East consistently differed from others on three of the four QFIFE subscales, showing lower median levels.

Conclusions: Some determinants are perceived to be more influential than others, becoming barriers or enablers to nurse-family engagement in adult ICU. Research that investigates contextual determinants and which compares implementation and improvement initiatives tailored to address family engagement practices barriers and enablers are needed.

Relevance to Clinical Practice: Knowledge of this international study expands our understanding of enablers and barriers in family engagement that may inform family engagement practice improvement efforts around the world.

KEYWORDS

communication, critical care nursing, family nursing, intensive care unit, social factors

1 | INTRODUCTION

Family engagement is defined as a partnership between families and health care professionals and involves a collaborative effort to improve the quality of care to patients and their health outcomes.¹ Nurse-promoted family engagement involves an active partnership between nurses and families when caring for patients within the intensive care unit (ICU).^{1–3} It is an approach to care that aims to improve the patient and family's capacity to cope with critical illness. Family engagement promotes positive health outcomes for individual family members and the family as a whole.^{4,5} For example, family engagement increases family satisfaction and improves family mental health.⁶ Proactive involvement of families in care processes and decision-making has the potential to reduce family distress.^{6–9} ICU guidelines recommend family engagement as part of evidence-based ICU care^{10–12} but the type of engagement that is desired, or feasible, lacks clarity.

2 | BACKGROUND

The art and science of family engagement in ICU is emerging as an essential element of ICU care. In their seminal framework for patient and family engagement in health care, Carman et al.⁴ suggested levels of engagement ranging from consultation and involvement to partnership. Engagement practices are influenced by a variety of factors such as individual patient and family beliefs and health literacy, clinician training and skills, organizational culture and policies and societal expectations.⁴ In the ICU, family engagement is founded on principles of collaboration, information-sharing and communication, partnering,

What is known about the topic

- Family engagement is a complex phenomenon.
- There is limited literature related to global intensive care unit (ICU) family engagement practices, including enabling and limiting factors.

What this paper adds

- This small but international study provides more detail on family-specific factors that guide nurse decision-making on family engagement in care.
- This study offers insights on differences in intensive care unit (ICU) family engagement based on geography—this is important as few studies in literature examine family engagement from an international perspective.
- This study highlights aspects that ‘tip the balance’ to improve or hinder family engagement practices in ICU.
- This study emphasizes that families are complex structures and respond uniquely to the ICU, and influences nurse-family engagement.

and active involvement in care.¹³ A continuum from passive to active engagement has been proposed, starting from family presence, family as a recipient of care, meeting family needs, communication with family (including information-sharing and decision-making), and involving

family in the direct physical care of the patient.^{3,14} Specific methods have been suggested to promote family engagement, including structured family meetings,³ ICU diaries¹⁰ and advanced practice nurse-led family support.¹⁵

The adoption of family engagement practices and interventions in ICU requires improvement¹⁶ as translation of family engagement into practice has not been fully realized. For example, in a global survey in 40 countries results suggested that the recommended family engagement interventions had not been widely adopted and varied considerably.¹⁷ Written information (61%), family conferences (54%), and open visitation (40%) were the most frequently reported engagement practices¹⁷ but this does not ensure that interaction with clinicians has occurred. There was a high variability in nurse-family engagement practices in a global qualitative study.¹⁸ Hetland et al.¹⁹ developed and tested the 'Questionnaire on Factors that Influence Family Engagement' (QFIFE) that identifies specific enablers and barriers to family engagement in the ICU.

Factors around patient/family, clinician, and the organization can affect family engagement in care.¹⁹ For example, patient and family-related factors that seem to influence clinicians' engagement practices are patient acuities, patient and family preferences, and perceptions of family resources, functioning and health literacy.^{3,19,20} Clinicians can view families as a burden with insufficient time to address complex issues and compounded by a lack of staff education or skills regarding care of the family.^{3,17,20,21} Organizational culture, policy and leadership,³ ICU structures, such as staffing and unit layout,¹⁷ inconsistencies in interprofessional support,²¹ and communication¹⁶ have been identified as factors that promote or hinder family engagement.

There are calls for more research on family engagement practices in the ICU.^{2,22} Critical care nurses are key to facilitating family engagement within the interprofessional team, as they often control families' access to patients and are crucial to effective communication.²³ Hence, we aimed to gain a comprehensive understanding of nurse-family engagement practices by exploring the factors that enable or hinder engagement between critical care nurses and families. This paper presents the quantitative component of a larger qualitative study to deepen understanding of family engagement practices in ICU with a focus on nurse's experiences.

3 | METHODS

3.1 | Study aim

To investigate the factors that enable or hinder adult ICU nurse-family engagement and to explore potential international variations.

3.2 | Design

We conducted a descriptive, cross-sectional survey using the 'Questionnaire on Factors that Influence Family Engagement' (QFIFE).¹⁹ Data reported in this study were collected as part of a qualitative

parent study investigating nurse-family engagement practices in adult ICU¹⁸ where 65 nurses participated. The data reported in this manuscript are the quantitative results from the QFIFE questionnaire, as well as the responses to the open-ended questions from the QFIFE.

3.3 | Setting and sample

The study took place in 23 adult intensive care units in 10 countries across 5 continents between July 2018 and December 2019. Adult ICUs were selected based on their accessibility to the research team and agreement from the sites to participate.

Inclusion criteria for participants were, being a registered critical care nurse, holding a nursing diploma or degree, having been employed at the study site for at least 6 months, providing direct patient care, and being able to converse in English, German or Japanese depending on the study setting. Exclusion criteria were being agency or temporary staff and having no direct patient contact.

3.4 | Recruitment

Participants were recruited into the parent study using informational flyers, invitational letters and electronic communication. There were slight variations in recruitment approaches across countries depending on local requirements.¹⁸ Interested nurse participants contacted the research team and were given further information about the study and confirmed that they met inclusion criteria.

3.5 | Data collection

As part of the parent study, participants were asked to complete a paper-pencil demographic form and the QFIFE about their family engagement practices. The quantitative data were collected after the qualitative interviews.¹⁸

To assess factors that influence nurses' family engagement practices, we used the 15-item QFIFE.¹⁹ The QFIFE consists of four different subscales: *ICU environment* (items 1–5) measures nurses' appraisal of how well the work environment (i.e., ICU structural factors such as layout, policies and staffing) supports family engagement; *patient acuity* (items 6–7) assesses nurses' perceptions about beliefs around the involvement of families in the care of patients on life-sustaining treatments; *nurse workflow* (items 8–10) estimates nurse perception of the impact of family engagement on their workflow and *attitude toward family caregiver engagement in care* (items 11–15) obtains views on the benefit of engaging families in the care of the patient.¹⁹ The instrument also includes five open-ended questions that assess nurse perspectives about engaging families¹⁹; the questions are displayed in Table 1.

All items are rated on a six-point Likert-type scale ranging from one (strongly disagree) to six (strongly agree). Items 6 to 10 are reverse coded prior the calculation of mean subscale scores. A higher mean score represents greater perceived influence of factors that

TABLE 1 Open-ended questions^a

How do you determine which family caregivers should be involved in ICU care?

How do you determine to what extent families should be involved in ICU care?

What concerns you most about involving family caregivers in ICU care?

What barriers do you face in involving family caregivers in ICU care?

What factors help you to involve family caregivers in ICU care?

^aReproduced with permission from Hetland et al.¹⁹

facilitate the engagement of families in patient care. Satisfactory internal consistency has been reported, with Cronbach's alphas of the subscales ranging from .73 to .83.¹⁹ In our sample, Cronbach's alpha was $\geq .80$ for all subscales except the workflow subscale ($\alpha = .59$).

We have translated the QFIFE with permission from English into German and Japanese. For each language, translation occurred through two members of the research team and two independent translators, using a four-phase procedure that includes two initial translations, a synthesis of these translations, two back translations and an expert committee review, to finalize the translated version.²⁴ Translated versions for this study were reviewed by the country research team, who all spoke fluent English and had ICU experience, to assure face validity of the questionnaire,²⁵ however, psychometric properties of these translated versions have not yet been published. The open-ended questions were written in the native language, translated by the local researcher (at the study sites) together with the research team.

3.6 | Data analysis

3.6.1 | Statistical analysis

All statistical analyses were performed using IBM SPSS 27.0. Most questionnaires were fully completed, in case a single item was missing, the respective data set was excluded from the affected QFIFE subscale to meet the quality criteria of this instrument. Sample sizes per single item as well as per total subscale are reported. All continuous variables were tested for normal distribution using Kolmogorov-Smirnov test. Non-parametric statistical methods were used due to non-normal distribution and modest sample size.

Chi-square tests were conducted for all categorical data and assumptions were met as expected cell frequencies were ≥ 5 . To determine the effect of geographical region, Kruskal-Wallis tests were performed for all continuous variables (i.e., nurses' characteristics and QFIFE subscales). In addition, post-hoc pairwise comparisons and Bonferroni correction for multiple testing were applied. Effect sizes were calculated using Pearson's r . Effect sizes were interpreted²⁶ with $r = 0.10$ indicating a small effect size, $r = 0.30$ indicating a medium effect size, and $r = 0.50$ indicating a large effect size. Alpha level was set at $p < .05$ for all statistical analyses.

3.6.2 | Content analysis

Inductive content analysis was used to analyse the responses to the open-ended questions.^{27,28} First, four members of the research team independently reviewed and coded the first 10 responses to each question. Then, the research team met to review codes, resolve coding discrepancies, and finalize codes for the remaining responses. Each researcher independently coded the remaining responses and developed preliminary categories. The team met additional times to discuss codings and to finalize analysis. The analytic steps and final analyses were then reviewed by a study team member with extensive qualitative expertise.

3.6.3 | Data integration

Emerging categories and subcategories from the content analysis were compared and contrasted with the QFIFE subscales and sorted according to whether they presented primarily as a barrier or enabler to engagement.²⁹

3.6.4 | Rigour and trustworthiness

Several strategies were used to enhance rigour of the qualitative study component. A team of experienced researchers independently analysed the data and compared their individual coding and emerging meaning constructs. Agreement was high. The research team discussed the emerging variances until a consensus that was closest to the data was reached. The relationship to the statistical findings was discussed with the entire research team during data integration. Meeting notes of analytical processes were kept to record the development of the analysis. More detail about the trustworthiness of the parent study can be found in Naef et al.¹⁸

3.7 | Ethical consideration

Ethical approvals were obtained from the responsible ethics committee in each study site according to country regulations and standards. Participants were invited to participate, informed about the study, and signed a written informed consent document; they could withdraw at any point before data integration. Participant numbers were used to ensure confidentiality. All data were stored securely as required by ethical regulations to meet data protection requirements. Only anonymized data were shared with the global research team.

4 | RESULTS

4.1 | Participant characteristics

A total of 61 nurses (from a possible 65) across five continents completed the QFIFE survey, which is a response rate of 94%; with

TABLE 2 Participant characteristics according to continents

Variable	Continents												H _{df} /χ ² df				
	All	Europe			Asia			Africa and Middle East			North America			Oceania			
	N	N	N	N	N	N	N	N	N	N	N	N		N	N	N	
Age (years), Mdn (IQR)	60	39.00 (19.00)	21	42.00 (25.00)	13	30.00 (6.00)	12	41.00 (13.00)	6	31.50 (13.00)	8	48.00 (15.00)	8	48.00 (15.00)	11.364*		
Years of work experience, Mdn (IQR)	61	13.00 (17.00)	21	21.00 (20.00)	13	7.00 (5.00)	12	16.50 (13.00)	7	7.00 (29.00)	8	24.50 (25.00)	8	24.50 (25.00)	12.034*		
Years of work in ICU care, Mdn (IQR)	60	10.00 (16.00)	21	14.00 (21.00)	13	4.00 (6.00)	12	10.00 (9.00)	6	6.00 (28.00)	8	17.50 (18.00)	8	17.50 (18.00)	8.104		
Years of work in current ICU care, Mdn (IQR)	61	7.00 (13.00)	21	10.00 (18.00)	13	4.00 (6.00)	12	6.00 (9.00)	7	3.00 (26.00)	8	8.50 (17.00)	8	8.50 (17.00)	4.794		
Gender (female), N (%)	61	46 (75.4)	21	18 (85.7)	13	9 (69.2)	12	9 (75.0)	7	2 (28.6)	8	8 (100.0)	8	8 (100.0)	12.364*		
Highest degree, N	61		21		13		12		7		8		8		29.968***		
Diploma, N (%)		18 (29.5)		13 (61.9)		0 (0.0)		4 (33.3)		1 (14.3)		0 (0.0)		0 (0.0)			
Bachelors' degree, N (%)		36 (59.0)		7 (33.3)		8 (61.5)		8 (66.7)		6 (85.7)		7 (87.5)		7 (87.5)			
Masters' degree, N (%)		7 (11.5)		1 (4.8)		5 (38.5)		0 (0.0)		0 (0.0)		1 (12.5)		1 (12.5)			
ICU certification (yes), N (%)	61	46 (75.4)	21	17 (81.0)	13	6 (46.2)	12	9 (75.0)	7	6 (85.7)	8	8 (100.0)	8	8 (100.0)	9.404		
Training family engagement (yes), N (%)	61	12 (19.7)	21	0 (0.0)	13	4 (30.8)	12	4 (33.3)	7	2 (28.6)	8	2 (25.0)	8	2 (25.0)	8.074		
ICU policy on family engagement (yes), N (%)	60	18 (30.0)	21	6 (28.6)	12	7 (58.3)	12	1 (8.3)	7	4 (57.1)	8	0 (0.0)	8	0 (0.0)	13.184*		
Type of ICU, N	61		21		13		12		7		8		8				
Multidisciplinary, N (%)		35 (57.4)		7 (33.3)		13 (100)		6 (50.0)		1 (14.3)		8 (100.0)		8 (100.0)	31.0412**		
Surgical, N (%)		13 (21.3)		6 (28.6)		0 (0.0)		4 (33.3)		3 (42.9)		0 (0.0)		0 (0.0)			
Medical, N (%)		5 (8.2)		2 (9.5)		0 (0.0)		2 (16.7)		1 (14.3)		0 (0.0)		0 (0.0)			
Other (i.e., burns, trauma, neuro), N (%)		8 (13.1)		6 (28.6)		0 (0.0)		0 (0.0)		2 (28.6)		0 (0.0)		0 (0.0)			

Note: N, sample size; H, Kruskal-Wallis tests, χ², Chi-square tests.

Abbreviations: Mdn, median; ICU, intensive care unit; IQR, interquartile range.

*p ≤ .05.

**p ≤ .01.

***p ≤ .001.

TABLE 3 QFIFE subscales and single items across continents

Subscales and single items of QFIFE ^a	Continents												H _{df}
	All	Europe		Asia		Africa and Middle East		North America		Oceania			
	N	N	N	N	N	N	N	N	N	N	N		
ICU environment, Mdn (IQR)	60	3.10 (1.75)	2.70 (2.00)	13	3.60 (0.60)	12	1.60 (1.55)	7	3.40 (1.60)	8	3.10 (1.30)	15.384**	
1. My unit is physically set up in a way that makes involving family caregivers in patient care possible	61	3.00 (3.00)	21 3.00 (3.00)	13	4.00 (1.00)	12	2.00 (4.00)	7	3.00 (2.00)	8	4.00 (3.00)	4.464	
2. My unit is adequately staffed to allow me time to involve family caregivers in patient care	61	4.00 (2.00)	21 3.00 (2.00)	13	4.00 (1.00)	12	1.00 (4.00)	7	5.00 (1.00)	8	5.00 (3.00)	12.104*	
3. My unit has established written policies regarding involving family caregivers in patient care	60	2.00 (2.00)	20 2.00 (3.00)	13	2.00 (2.00)	12	1.00 (1.00)	7	3.00 (3.00)	8	2.00 (0.00)	8.284	
4. My unit supports family caregiver presence during procedures (e.g. resuscitation line placement)	61	2.00 (3.00)	21 2.00 (3.00)	13	2.00 (1.00)	12	1.00 (1.00)	7	4.00 (2.00)	8	3.00 (3.00)	11.974*	
5. My unit has designated space and resources for families who wish to remain with their loved ones in the ICU	61	3.00 (3.00)	21 2.00 (3.00)	13	4.00 (1.00)	12	1.50 (1.00)	7	3.00 (3.00)	8	2.50 (3.00)	12.514*	
Patient acuity, Mdn (IQR)	60	5.00 (1.50)	20 5.00 (2.38)	13	4.50 (1.75)	12	4.25 (2.25)	7	5.50 (1.00)	8	5.00 (1.25)	5.844	
6. Family caregivers of patients who are hemodynamically unstable should be excluded from participating in patient care ^b	61	5.00 (2.00)	21 4.00 (2.00)	13	5.00 (2.00)	12	4.00 (3.00)	7	5.00 (1.00)	8	5.00 (2.00)	6.284	
7. Patients on life-sustaining treatments should not have family caregivers involved in patient care ^b	60	5.00 (2.00)	20 5.00 (3.00)	13	5.00 (2.00)	12	5.00 (4.00)	7	6.00 (1.00)	8	5.00 (1.00)	4.274	
Nurses' workflow, Mdn (IQR)*	60	4.00 (1.33)	20 4.83 (1.33)	13	4.00 (0.67)	12	3.17 (1.33)	7	4.33 (1.00)	8	4.67 (1.17)	15.87**	
8. Allowing family caregivers to assist in patient care interrupts my work ^b	60	4.00 (2.00)	20 5.00 (3.00)	13	4.00 (2.00)	12	3.50 (3.00)	7	5.00 (2.00)	8	4.50 (1.00)	3.964	
9. My clinical performance will be affected by the presence of family caregivers in the room while I am providing patient care ^b	60	5.00 (2.00)	20 5.00 (1.00)	13	4.00 (2.00)	12	2.50 (3.00)	7	3.00 (2.00)	8	5.00 (2.00)	21.104***	
10. I'm too busy to incorporate family caregivers in patient care ^b	60	4.00 (2.00)	20 4.50 (2.00)	13	4.00 (2.00)	12	3.50 (4.00)	7	5.00 (1.00)	8	4.50 (2.00)	5.384	
Nurses' attitudes, Mdn (IQR)	60	4.60 (1.35)	20 4.60 (1.50)	13	4.80 (0.80)	12	3.30 (1.30)	7	4.80 (1.40)	8	5.00 (1.20)	11.434*	
11. Allowing family caregivers to assist in patient care could help me more accurately assess distressing symptoms in my patients	60	5.00 (2.00)	20 5.00 (2.00)	13	5.00 (1.00)	12	3.50 (1.00)	7	5.00 (2.00)	8	4.50 (2.00)	12.134*	
12. Allowing family caregivers to assist in daily patient care could improve caregiver levels of stress, anxiety, and fear	60	5.00 (2.00)	20 5.00 (1.00)	13	5.00 (2.00)	12	4.00 (2.00)	7	5.00 (2.00)	8	5.00 (1.00)	7.834	
13. I think that family caregivers who are involved in patient care are better able to make care decision for their loved ones	60	5.00 (2.00)	20 5.00 (2.00)	13	5.00 (1.00)	12	5.00 (2.00)	7	5.00 (2.00)	8	5.00 (2.00)	2.204	

TABLE 3 (Continued)

Subscales and single items of QFIFE ^a	Continents												
	All		Europe		Asia		Africa and Middle East		North America		Oceania		
	N	Mdn (IQR)	N	Mdn (IQR)	N	Mdn (IQR)	N	Mdn (IQR)	N	Mdn (IQR)	N	Mdn (IQR)	
14. I think involving family caregivers in patient care improves patient safety	60	4.00 (2.00)	20	4.00 (2.00)	13	4.00 (2.00)	12	2.50 (3.00)	7	4.00 (2.00)	8	4.00 (2.00)	6.51 ₄
15. I think involving family caregivers in patient care increases overall quality of care	60	5.00 (1.00)	20	5.00 (2.00)	13	5.00 (1.00)	12	2.50 (4.00)	7	5.00 (2.00)	8	5.00 (2.00)	11.85 ₄ *

Note: N, sample size; H, Kruskal-Wallis tests.

Abbreviations: Mdn, median; ICU, intensive care unit; IQR, interquartile range; QFIFE, Questionnaire on Factors that Influence Family Engagement.

^aThe QFIFE measures nurse perceptions of ICU physical environment and culture, clinical stability of patient, disruptive workflow, and the attitude toward family engagement in the delivery of ICU care.

^bItems are reversed coded prior calculation of subscales mean scores; The score ranges from 1–6 whereby a higher score indicates a greater magnitude of the influence of the perceived facilitators to family engagement.

* $p \leq .05$.

** $p \leq .01$.

*** $p \leq .001$.

21 stemming from Europe, 13 from Asia, 12 from Africa and Middle East, 8 from Oceania (which included Australia and New Zealand), and 7 from the United States of America (USA). Sample characteristics are listed in Table 2. Median age was similar across all continents, but the length of work experience was lower in Asia and North America. Most participants had a Bachelor's degree qualification or higher, except for Europe, and a majority held ICU certification. Participants worked in a range of surgical, medical and general ICUs. Only about one-third indicated to have an ICU policy on family engagement, ranging from 8% (Africa & Middle East) to 57% (North America).

4.2 | Factors influencing family engagement

The QFIFE subscales ranged from Md = 3.10 for the ICU environment to Md = 5.00 for patient acuity (see Table 3), whereby higher scores indicate higher magnitude of the perceived influence of the subscale or item being a facilitator of engagement. Overall, *patient acuity* and *nurses' attitudes* seemed to be the most influential facilitator, followed by nurse workflow and ICU environment.

Among the recorded nurse characteristics, the higher nurse education showed a statistically significant influence, but only on the *ICU environment* subscale ($H [2] = 10.48, p = .005$). Post-hoc comparisons with adjusted p -values showed that nurses with diploma level education showed lowest scores compared with nurses with a bachelor's ($p = .016, r = 0.38$) and master's degree ($p = .019, r = 0.55$). All other nurse characteristics were non-significant. When exploring the differences between geographical regions, Africa/Middle East consistently differed on three of four QFIFE subscales (except patient acuity), showing lower median levels. Effect sizes tended to be medium ($r = 0.3$) to large ($r = 0.5$) (Table 3).

The open-ended question data showed a nuanced picture of the complexity of family engagement in care, suggesting factors that could tip the balance (transform a barrier to an enabler or an enabler to a barrier), and confirmed quantitative findings (Table 4—Integrated data). Quantitative and open-ended question data were integrated around the four QFIFE subscales with one additional category emerging from the analysis: *Families are complex structures and respond uniquely to the ICU and patient*. This category emerged due to the number of comments around the family factors affecting engagement.

ICU environment: This subscale scored lowest among all QFIFE subscales, with an Md = 3.10, suggesting that it is a less influential facilitator (Table 3). The lowest-scoring individual items were *written policies* (item 3) and *support presence during procedures* (item 4). The highest-scoring item was *sufficient staff* (item 2). Significant effect of continent was evident ($p = .004$); Pairwise comparisons with adjusted p -values showed that nurses from Africa/Middle East had significantly lower scores in *ICU environment* than nurses from North America ($p = .044, r = 0.65$) and nurses from Asia ($p = .003, r = 0.72$).

Unit and organizational considerations—ability to work with families in the ICU was a category uncovered in open-ended question analysis (Table 4). Barriers to family engagement included inadequate

TABLE 4 Integrated data

Category	Barrier	Enabler	Tipping the balance ^a	Quotations
Unit and organizational considerations— Ability to work with families in the ICU (QFIFE subscale: ICU environment)	<ul style="list-style-type: none"> Inadequate physical space Lack of collaboration by team members No explicit policy or guidelines to support family engagement 	<ul style="list-style-type: none"> Unit family-oriented culture with interprofessional team support Resources for staff and families 	<ul style="list-style-type: none"> Use of non-regular staff Attitude of staff and family toward family involvement Existing policies in the ICU 	<p>'Physical room set-up/not enough space.' (1085^b USA)</p> <p>'Availability of family resources from other professions, ability to offer family meetings.' (1084 USA)</p> <p>'People being open and accepting of it. No unit philosophy of encouraging it but there is nothing stopping it.' (2152 Australia)</p> <p>'Colleagues who disagree with involving them... their philosophy "art" of nursing differ to mine...' (6011 New Zealand)</p> <p>'Having a neutral party such as a chaplain available to help offset the emotional burden. Taking my own emotions off the table. Getting breaks from exhausting families.' (1012 USA)</p> <p>'There should be a policy in place.' (7026 South Africa)</p> <p>'The attitude of family and limited visiting hours' (3057 Hong Kong)</p> <p>'Having lots of agency nurses makes the shift harder to manage.' (9104 UK)</p>
Workflow that permits family involvement in care (QFIFE subscale: nurses' workflow)	<ul style="list-style-type: none"> Inadequate time Family disrupting care Miscommunication Heavy workload/ levels of staffing 	<ul style="list-style-type: none"> Time to connect with family to understand their perspectives, particularly cultural and religious considerations 	<ul style="list-style-type: none"> Nurses' knowledge, skills, and intuition about how to engage family in complex situations Balancing benefits and risks of involvement 	<p>'Time and translation for medical jargon to layman's terms.' (1084 USA)</p> <p>'Knowing their (patient and family) religion, restrictions, diets and language.' (7025 South Africa)</p> <p>'Interrupting our work.' (5145 Saudia Arabia)</p> <p>'When I have the confidence to educate them (family members).' (1011 USA)</p>
Patient severity of illness and safety (QFIFE subscale: patient acuity)	<ul style="list-style-type: none"> Patients who require extensive nursing intervention and support 	<ul style="list-style-type: none"> Patient stability 	<ul style="list-style-type: none"> Nursing assessment of patient status 	<p>'It depends on patient condition and need for care.' (2151 Australia)</p> <p>'Whether the patient's general condition is stable.' (4702 Japan)</p> <p>'When the patient is stable.' (1011 USA)</p> <p>'Increased restlessness, agitation, disruption of routines, and usual processes, patients should be protected/safe at all times (privacy).' (8031 Switzerland)</p>
Potential for positive or negative outcomes as a result of family involvement (QFIFE subscale: nurses' attitudes)	<ul style="list-style-type: none"> Families should not be involved in care Family member emotional burden Perceived safety risks to patient and family 	<ul style="list-style-type: none"> Family positively contributes to care Nurse confidence in family care abilities 	<ul style="list-style-type: none"> Nurses' decisions about how to involve and type of care involved 	<p>'All patient's relatives can be involved.' (3057 Hong Kong)</p> <p>'The only limits should be if involvement poses a risk to the family.' (9101 UK)</p> <p>'If family members would like to be involved more, it should be limited to hygiene (i.e., washing only) in my opinion.' (8032 Switzerland)</p> <p>'You have to ensure that what you are involving them with is something that is safe for the patient and safe for them. That you are not asking them to do something that is beyond their mental, physical, and emotional capability.' (2153 Australia)</p> <p>'Level of education, cultural barriers, socioeconomic factors.' (7021 South Africa)</p> <p>'...Infection control issues (both patients and carers) or if your patient is on multi-organ support you may have to restrict.' (9104 UK)</p> <p>'Intuitively, based on my impression of the family, whether it is reasonable/could be asked of them?' (0193 Austria)</p>

TABLE 4 (Continued)

Category	Barrier	Enabler	Tipping the balance ^a	Quotations
Families are complex structures and respond uniquely to the ICU and patient (No QFIFE corresponding subscale)	<ul style="list-style-type: none"> • Difficult family dynamics • Miscommunication • Family having difficulty understanding situation (health literacy) 	<ul style="list-style-type: none"> • Nursing assessment of family coping and readiness • Family readiness/education • Patient comfort 	<ul style="list-style-type: none"> • Cultural, religious and bonding of family to patient impacts their involvement • Family members' individual willingness to be involved in care must be considered • Family member's specific role/relationship to patient • Family member's attitude • Patient wishes • Patient response 	<p>'Next of kin and honestly, who is there the most.' (1011 USA)</p> <p>'Parents as well as spouse/partner.' (8032 Switzerland)</p> <p>'If the member of the family is educated it's easy to involve them.' (5142 Saudi Arabia)</p> <p>'Patients' wishes are important while deciding who to be involved....' (9104 UK)</p> <p>'Differences between patient and relative wishes.' (9107 UK)</p> <p>'...Miscommunication or interpretation of information.' (2151 Australia)</p> <p>'You need to use interpersonal and assessment skills to determine appropriateness of involvement (e.g., if a patient's relative is particularly distressed it may be inappropriate for them to be involved in care).' (9107 UK)</p> <p>'Family determines it. Family willingness and their level of comfort...' (2152 Australia)</p> <p>'...Calming conscious patient during stay in ICU.' (5141 Saudi Arabia)</p> <p>'In most cases families tell you what to do for the patient even if it something that's not going to help the patient healing process. Talking about the patient's progress outside the hospital without patients consent. Taking photos and sending to the media.' (7021 South Africa)</p> <p>'Level of education, cultural barriers, socioeconomic factors' (7024 South Africa)</p> <p>'Depends on the relationship between caregiver and the patient, and the attitude of the family members toward taking care of the patient. Also, I would assess family caregiver's understanding of scope of care, for instance, what they can do and what they cannot.' (3058 Hong Kong)</p>

^aThese issues can transform a barrier to an enabler or an enabler to a barrier.

^bParticipant number relates to country, then researcher, and participant. For example, 9 = UK, 10 = researcher, 4 = participant 4 (9104). Country codes were: 01 = Austria; 2 = Australia; 3 = Hong Kong; 4 = Japan; 5 = Kingdom of Saudi Arabia; 6 = New Zealand; 7 = South Africa; 8 = Switzerland; 9 = United Kingdom; 10 = United States of America. There were 17 researchers involved in collecting data.

physical space, lack of collaboration by team members, and no explicit policy or guideline to support family engagement, confirming the low score for this specific item on the QFIFE. The concept of physical space was highlighted frequently by participants as affecting engagement. Enabling factors included unit family-oriented culture with interprofessional team support as well as resources for staff and family members:

...The cooperation of allied health (physios, dietician), doctors and other disciplines in working with families and providing a supportive environment where family involvement is welcomed. (2153 Participant Australia)

Importantly, when nurses perceived health care team support, they were better able to care for families. One nurse explained the importance of a supportive family climate in the ICU:

General culture of inviting family presence and valuing family at bedside and communication. (6014 New Zealand)

Factors that could tip the balance of family engagement included existing ICU visiting guidelines, or the use of non-regular staff (e.g., agency).

Nurses' workflow. This subscale scored at $Md = 4.00$ (Table 3). The lowest-scoring items were *work interruption* (item 8) and *being too busy* (item 10), suggesting that these items were less likely to facilitate family engagement. The highest-scoring item was *family engagement affected performance* (item 9). We found a significant group effect of continent ($p = .003$) whereas nurses from Africa/Middle East showed significantly lower scores than nurses from Europe ($p = .003, r = 0.64$).

Open-ended question data highlighted nurses' perspectives about *Workflow that Permits Family Involvement in Care* (Table 4). Barriers

such as inadequate time, family disrupting care, miscommunication, and heavy nurse workload/levels of staffing hindered their ability to truly engage with families, affirming the QFIFE findings for these specific items. One nurse highlighted '(families) increase our workload' (5144 Participant Saudi Arabia). Nurses needed time to connect with family members to understand their perspectives, particularly cultural and religious considerations, as the nurse explained:

Establishing good nurse, patient/family support...being honest and clear on explanations...have time to give patients and family time to talk about concerns (9104 United Kingdom—UK)

Nurses could 'tip the balance' in family engagement by using their knowledge, skills, and intuition in complex situations. Nurses balanced the benefits and risks of family involvement in care:

You have to ensure that what you are involving them with is something that is safe for the patient and safe for them. That you are not asking them to do something that is beyond their mental, physical, and emotional capability. For example, you wouldn't ask them to suction an ETT [endotracheal tube], you may ask them to be involved with washing a patient's hair, and ensuring they are supported, guided and reassured throughout. (2153 Australia)

Patient acuity: This subscale scored highest among the QFIFE subscales, with an $Md = 5.00$ (Table 3), which is also reflected on the item level (i.e., value of $Md = 5$ for item 6 *unstable: exclusion and life-sustaining: no involvement*) indicating that nurses believed that patient acuity is an influential facilitator of family engagement. There was no significant group effect of continent for the subscale ($p = .211$).

Patient Severity of Illness and Safety emerged from open-ended question analysis and links with QFIFE *patient acuity*. Nurses shared perspectives that patients requiring extensive nursing intervention which limited their ability to engage family members in care, primarily for safety reasons:

They (family) might accidentally remove dangerous/very important lines (e.g., CVP or arterial lines) not knowing the importance of the line or the danger the patient will face if removed (7021 Participant South Africa)

Stable patients were more likely to lead to family involvement in care. Nurses' assessment of the patient's status guided their plans for involving families, as one nurse explained:

(If the patient) has a problem in clotting factor, (we) won't encourage family to perform shaving or nail cutting. (3052 Hong Kong)

Nurses' attitude: This subscale scored high at $Md = 4.60$ (Table 3), indicating that nurses' attitudes are important facilitators of family engagement. The lowest-scoring (i.e., less influential) item was *improved patient safety with involvement* (item 14). All other items had high nurse agreement with a value of 5 (i.e., item 11 *assessed distress in patients*, item 12 *improved stress in family*, item 13 *better in making decisions*, and item 15 *increased quality with involvement*). There was a significant effect of continent ($p = .042$), but none of the pairwise comparisons remained significant after adjusting Bonferroni correction for multiple testing.

The corresponding open-ended question category was **Potential for Positive or Negative Outcomes as a Result of Family Involvement**. Barriers to involving families included the nurse attitude that family should not be involved in care, the potential for family member/s to be an emotional burden, and concerns about the risks to patient and family safety. One nurse shared:

Colleagues who disagree with involving them...their philosophy...art of nursing differs to mine...Some feel inexperienced thus flustered, unempowered, threatened by offering to involve. (6011 New Zealand)

Enabling factors included nurses' attitude that family members positively contribute to care and nurse confidence in their family care abilities:

My own attitude towards involving family in patient care helps, I try to do this where possible and encourage colleagues to consider it. (2153 Australia)

Nurses could facilitate or hinder family engagement based on their decisions about how to involve families and the type of care involved. Nurses named several aspects they considered when determining if involving family was appropriate, such as a nursing assessment of family coping and family readiness to be involved:

My baseline is to involve families as much as possible in the ICU. I also communicate with the families to determine their expectations and wishes to be involved. (6014 New Zealand)

Families are complex structures that respond uniquely to the ICU and patient: This category arose as an addition from the open-ended question data. The responses revealed that difficult family dynamics, miscommunication and family having difficulty understanding the situation or health literacy hindered family engagement. Nurses gave various examples of family-specific factors that affected their practice of family engagement, including 'A lot of disagreement' (5145 Saudi Arabia), 'fighting and refusing' (5146 Saudi Arabia), '...miscommunication or interpretation of information' (2151 Participant Australia) and 'when they don't grasp (the) situation' (9102 UK). In contrast, family engagement was promoted by nursing assessment, recognizing families coping, readiness, and education as enabling

family engagement: 'If the member of the family is educated it's easy to involve them' (5142 Saudi Arabia).

Nurses encouraged family involvement when they believed the family positively contributed to care and based on the family member's relationship to the patient (e.g., did they have a close relationship) and their family role (e.g., parent, child, sibling). The patient's wishes and response were very important to nurses, as 'differences between patient and relative wishes' (9107 UK) complicating family involvement in care. A nurse described her role in patient advocacy:

Communication with those present...always have to advocate for patient so need to ensure their privacy, dignity, and to the best of your knowledge, who may be appropriate, would they want it, whose needs are being met. (6011 New Zealand)

Nurses assessed patient status before involving families and continuously assessed the patient's response to family involvement: 'How the patient responds (BP, agitation, ICPs, and HR) to the family's participation in care' (1012 United States of America—USA). If the nurse thought the patient was comforted by family, this enabled family engagement. In contrast, if the patient did not respond positively to family, this was a barrier to involving the family in care. Further, if families followed the guidance/expectations of the ICU staff, family engagement was promoted, if not, the engagement process was hindered.

Factors that could 'tip the balance' and serve as either an enabler or barrier were the family's cultural or religious beliefs, bonding within the family and family member role to the patient, and family members willing to be involved. The family member's background was also important, as one nurse noted 'Level of education, cultural barriers, socioeconomic factors' (7024 South Africa) affected engagement. Also, factors such as the patient's wishes, and the patient's response to family involvement in care were influential.

5 | DISCUSSION

This study's findings suggest that patient acuity and nurse attitudes are the strongest determinants of family engagement in adult ICU. Nurses' workflow, particularly their perception of time/workload and the impact of family engagement on their performance, seem to also determine nurse-family engagement. ICU environment was appraised to be less influential, particularly by nurses with a diploma versus those with a degree or postgraduate degree. These findings were similar to Hamilton et al.,¹⁶ although their study had more emphasis on leadership, and included a wider staff profile, such as doctors and managers.

This study makes an important contribution to the literature on aspects of family engagement across countries. We found some geographical variations, most notably related to ICU environment and nurse workflow, which were considered to be less influential by nurses working in Africa/Middle East. An explanation may be the

under development of family nursing in these countries or the lack of formalized family care programmes or interventions.³⁰ The cultural aspects related to different geographical contexts, attitudes and beliefs affecting the care of patients in ICU should not be underestimated. Family members may prefer to be involved in decision-making rather than direct care³¹ or their coping strategies may differ across cultures.³² The current study found few significant differences between continents in the QFIFE results, which might be due to the small sample size. More exploration into the complexity, including cultural aspects, affecting family engagement across the world is, therefore, needed.

While many of the identified barriers and enablers of engagement have been previously described,^{17,18,21} our findings suggest that there appear to be key factors that could 'tip the balance' of family engagement. For example, ICU environment was influenced by the negative attitudes of staff, lack of policies and using agency staff; whereas nurses' workflow was tipped by the level of staff knowledge and their ability to balance the risks versus benefits of involving family in care.

Interestingly, only level of education impacted nurses' perception in relation to ICU environment. Nurses with a degree or postgraduate education perceived the ICU environment to be more influential, potentially suggesting that more education increases perception of contextual determinants. A previous study that also used the QFIFE found a similar pattern¹⁹ but they found that nurses with higher age and more years of experience had higher total QFIFE scores, which was not the case in our study. However, there should be caution in comparing these studies as different measures for nurse characteristics were used.

Our quantitative results are comparable to the first published study using the QFIFE to measure determinants of nurse-family engagement across ICUs in the US, which included paediatrics and adults.¹⁹ Three subscales scored similarly (i.e., ICU environment, nurses' workflow, and nurses' attitude). In contrast, patient acuity scored higher in our study, indicating that patients' severity of illness was perceived to be a strong determinant of family engagement in adult ICUs. Staffing (ICU environment), family presence affecting nurse performance (nurses' workflow), nurse assessment of patient distress, family stress, and views of participation increasing decision-making and quality of care (nurses' attitude), were further influential determinants as measured with the QFIFE.

In a global study across 40 countries, staff shortages, lack of leadership support, ICU staff resistance, inadequate skills, perceived workflow interruption, or concerns about infection control were barriers to engagement.¹⁷ Engaged leaders, structured processes for family engagement, and team-based approaches to family care are documented as promoters of family engagement in the ICU.¹⁶ Interestingly, in our study, the ICU environment was reported to be less influential than other aspects impacting engagement practices, with the exception of staffing. It may be that without adequate nurse staffing, other supportive aspects of engagement (e.g., family-focused policies and team-based engagement approaches) are not as successful.

Nurse responses from our study suggest that families are complex and respond uniquely to the ICU situation. This finding is aligned with

other literature that suggests family dynamics and behaviours together with health literacy and cultural aspects are determinants of nurse-family engagement.^{16,21} Thirsk et al.³³ noted the influence of people (nurses, families, teams, and managers) and the structures of unit culture, staffing, environment, and policies on family-centred care. Our study supports people and structures as influential across countries and is important target for intervention development and improvement initiatives. Furthermore, family complexity may be an additional factor to consider when measuring engagement practices and requires further exploration.

Our analysis of nurse responses to the QFIFE open-ended questions highlights the complex interaction of various factors in nurse-family engagement within the ICU setting. For example, nurses worry that family members may distract them from patient care, a finding similar to Hetland et al.²¹ results. Nurses may experience a sense of internal conflict between organizational expectations of nurses and what is required to meet patient and family needs. This internal conflict may lead to nurse moral distress, which Arnold³⁴ classified as 'The Battle Within' when staff were pulled between what they were told to do and what they felt was the right thing to do. This moral dilemma was particularly evident in our study when shortage of staff, or high acuity, meant nurses could not undertake all the care they wished for the patient and family members. Attention to the ICU environment and patient acuity is needed, as nurses may not have the resources required to care for both the patient and the family effectively (e.g., staffing that is adequate for high patient acuity and permits the nurse time to support the family). The theory of nurse-promoted engagement with families in the ICU may serve as a guide to practice and policy changes to better support nurses' efforts.³⁵ Providing other family support resources such as a family specialist^{15,36} may be particularly helpful and reduce nurse moral distress.

5.1 | Limitations

A key limitation of this study is the overall small sample size, as well as the small sample size from each country; hence, our sample is unlikely to accurately represent nurses from each country or continent. The small number of participants per country meant that we could not compare findings across geographical regions. Additionally, nurses self-selected for the study which may lead to bias and limits generalizability. The German and Japanese versions of the QFIFE lack psychometric validation to ensure they are suitable tools. Family members have important perspectives to add and should be included in future studies. We did not review the open-ended question analysis with participants, therefore, the meaning of nurse responses may have been lost in translation or misunderstood. The qualitative and quantitative data were collected together and this may have given the participants cues, which then limited their responses. The data were collected prior to the COVID-19 pandemic which has changed family engagement practices and the present study does not reflect this historical effect.

5.2 | Implications and recommendations for practice

The results of this international study offer some important directions for policy, practice, and research. Key areas that can 'tip the balance' for positive or negative effect on family engagement should be considered. Policies should include family engagement explicitly and provide guidance on how to support the practice of family engagement. ICU nurses' need education on behaviours and practices that support family engagement in care. Despite recognition that engaging families is important, there remains limited research on the specific practices of family engagement and translation of family engagement into unit and organizational cultures. Additionally, further research about the unique family factors that influence family engagement is needed.

Effective implementation and improvement strategies that address influencers, such as staffing, perceptions of families as threats to patient safety or resistance toward family presence, are needed to overcome barriers to evidence-based family engagement practices. This study noted that families are complex and respond in a unique way to the ICU situation. While the knowledge base on determinants of family engagement is growing, insights into cultural variations and context-specific patterns, that are enablers or barriers, requires further exploration. Given the complexity of ICU practice and the skill required to engage with families while also caring for a critically ill patient, inviting former ICU family member feedback could enable nurses to improve family engagement skills. Continued study of the phenomenon of family engagement in care using robust mixed-method approaches is necessary to fully describe this unique area of ICU nursing practice and capture the complexity of family responses. Applying integrated clinical and implementation science research approaches to test and implement nurse-led family engagement interventions will improve family engagement practice in the ICU.

5.3 | Conclusions

This international study highlighted that families have complex dynamics and respond uniquely to critical illness and ICU care, which influences nurse-family engagement. The two factors of nurses' attitudes and acuity of patients, particularly when workload is increased, are key factors influencing family care and ICUs need to consider how to address these to provide sufficient family support. Some factors, such as staffing levels and family stressors 'tip the balance', meaning that family engagement in ICU is affected, either negatively or positively. This study is one of several¹⁶⁻¹⁸ to examine nurse-family engagement in ICU across continents but geographical differences need to be explored further with attention to culture and local policies. Research focusing on the understanding of contextual determinants, comparing implementation and improvement initiatives that are tailored to family engagement barriers and enablers are needed to fully integrate family engagement in adult ICUs.

ACKNOWLEDGEMENT

We would like to acknowledge the members of the Family Care in Acute/Critical Illness Research Cluster who were involved in collecting the data at the different sites, namely (in alphabetical order) Patricia Beierwaltes, Vico Chiang, David Clisbee, Jennifer De Beer, Junko Honda, Shota Kakazu, Martin Nagl-Cupal, Sandra Richardson, Tara Tehan, and Amanda Towell-Barnard. We further would like to acknowledge the International Family Nursing Association, which provided a platform for the researchers to connect.

FUNDING INFORMATION

This work was supported by the Froedtert Foundation in the USA (to Natalie McAndrew), the British Association of Critical Care Nurses (BACCN) in the UK (to Ann Price), and the JSPS KAKENHI Grant-in-Aid for Young Scientists in Japan (Shota Kakazu) and The Glen Taylor Nursing Institute for Family and Society at Minnesota State University Mankato in the USA (to Sandra Eggenberger).

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Raw data were generated at the above-named faculties and through the research cluster. Derived data supporting the findings of this study are available from the corresponding author [AMP] on request.

ETHICS STATEMENT

The study was submitted to the responsible Ethics Committee in each country/site if applicable. The study was conducted according to national guidelines and laws for research with humans in each country. All participants received a study information pack and more than 24 h of time to make a decision about participation. All participants signed a written informed consent before taking part in an interview: Australia—The Sir Charles Gairdner and Osborne Park Health Care Group Human Research Ethics Committee (PRN: RGS00992); Edith Cowan University Human Research Ethics Committee (22280 [RGS00992]). Austria—No ethics submission for this type of study is required based on national law; Hong Kong—Human Subjects Ethics Sub-committee (HSES), The Hong Kong Polytechnic University (HSEARS20180915001); Institutional Review Board of The University of Hong Kong / Hospital Authority Hong Kong West Cluster (HKU/HA HKW IRB) (UW 18-528). Japan—The ethics committee of Kobe University Graduate School of Health Sciences (749). New Zealand—University of Otago Ethical Approval (H18/093); Maori Consultation Approval Te Komiti Whakarite Canterbury District Health Board; Research Knowledge Transfer Committee, Ara Institute of Canterbury Number (1842). Saudi Arabia—King Abdullah International Medical Research Center and Institutional Review Board (RJ18/090/J). South Africa—University of KwaZulu-Natal, Humanities and Social Sciences Research Ethics Committee (HSS/1145/018). Switzerland—No ethics submission for this type of study is required based on national law. UK—Canterbury Christ Church University; Faculty of Health and

Wellbeing (17/H&W/33C, Ref 2018/GAP/17); East Kent Hospitals NHS Foundation Trust—Research and Innovation Department. USA—Medical College of Wisconsin/Froedtert Hospital (PRO00032383); IRB Approval from Minnesota State University, Mankato IRB, Mankato, MN, USA (1222351).

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REFERENCES

- Brown SM, Rozenblum R, Aboumatar H, et al. Defining patient and family engagement in the intensive care unit. *Am J Respir Crit Care Med*. 2015;191(3):358-360. doi:10.1164/rccm.201410-1936LE
- Burns KEA, Misak C, Herridge M, Meade MO, Oczkowski S. Patient and family engagement in the ICU. Untapped opportunities and Underrecognized challenges. *Am J Respir Crit Care Med*. 2018;198(3):310-319. doi:10.1164/rccm.201710-2032CI
- Goldfarb MJ, Bibas L, Burns K. Patient and family engagement in care in the cardiac intensive care unit. *Can J Cardiol*. 2020;36(7):1032-1040. doi:10.1016/j.cjca.2020.03.037
- Carman KL, Dardess P, Maurer M, et al. Patient and family engagement: a framework for understanding the elements and developing interventions and policies. *Health Aff*. 2013;32(2):223-231. doi:10.1377/hlthaff.2012.1133
- Goldfarb MJ, Bibas L, Burns K. Family engagement in the cardiovascular intensive care unit in the COVID-19 era. *Can J Cardiol*. 2020;36(8):1327.e1321-1327.e1322. doi:10.1016/j.cjca.2020.05.027
- Goldfarb MJ, Bibas L, Bartlett V, Jones H, Khan N. Outcomes of patient- and family-centered care interventions in the ICU: a systematic review and meta-analysis. *Crit Care Med*. 2017;45(10):1751-1761. doi:10.1097/ccm.0000000000002624
- Lee HW, Park Y, Jang EJ, Lee YJ. Intensive care unit length of stay is reduced by protocolized family support intervention: a systematic review and meta-analysis. *Intensive Care Med*. 2019;45(8):1072-1081. doi:10.1007/s00134-019-05681-3
- Scheunemann LP, McDevitt M, Carson SS, Hanson LC. Randomized, controlled trials of interventions to improve communication in intensive care: a systematic review. *Chest*. 2011;139(3):543-554. doi:10.1378/chest.10-0595
- Zante B, Camenisch SA, Schefold JC. Interventions in post-intensive care syndrome-family: a systematic literature review. *Crit Care Med*. 2020;48(9):e835-e840. doi:10.1097/ccm.0000000000004450
- Davidson JE, Aslakson RA, Long AC, et al. Guidelines for family-centered care in the Neonatal, pediatric, and adult ICU. *Crit Care Med*. 2017;45(1):103-128. doi:10.1097/ccm.0000000000002169
- Ely EW. The ABCDEF bundle: science and philosophy of how ICU liberation serves patients and families. *Crit Care Med*. 2017;45(2):321-330. doi:10.1097/ccm.0000000000002175
- Mitchell ML, Gill F, Grealy B, McCutcheon C, Greenwood M, Tramm R.. Partnering with families in critical care. ACCN Australian College of Critical Care Nurses. 2015. Accessed January 10, 2022. <https://www.accn.com.au/documents/item/289>.
- Mitchell ML, Coyer F, Kean S, Stone R, Murfield J, Dwan T. Patient, family-centred care interventions within the adult ICU setting: an

- integrative review. *Aust Crit Care*. 2016;29(4):179-193. doi:[10.1016/j.aucc.2016.08.002](https://doi.org/10.1016/j.aucc.2016.08.002)
14. Olding M, McMillan SE, Reeves S, Schmitt MH, Puntillo K, Kitto S. Patient and family involvement in adult critical and intensive care settings: a scoping review. *Health Expect*. 2016;19(6):1183-1202. doi:[10.1111/hex.12402](https://doi.org/10.1111/hex.12402)
 15. Naef R, von Felten S, Petry H, Ernst J, Massarotto P. Impact of a nurse-led family support intervention on family members' satisfaction with intensive care and psychological wellbeing: a mixed-methods evaluation. *Aust Crit Care*. 2021;34(6):594-603. doi:[10.1016/j.aucc.2020.10.014](https://doi.org/10.1016/j.aucc.2020.10.014)
 16. Hamilton R, Kleinpell R, Lipman J, Davidson JE. International facilitators and barriers to family engagement in the ICU: results of a qualitative analysis. *J Crit Care*. 2020;58:72-77. doi:[10.1016/j.jccr.2020.04.011](https://doi.org/10.1016/j.jccr.2020.04.011)
 17. Kleinpell R, Heyland DK, Lipman J, et al. Patient and family engagement in the ICU: report from the task force of the World Federation of Societies of Intensive and Critical Care Medicine. *J Crit Care*. 2018; 48:251-256.
 18. Naef R, Brysiewicz P, McAndrew NS, et al. ICU nurse-family engagement from a global perspective: a qualitative multi-site exploration. *Intensive Crit Care Nurs*. 2021;66:103081. doi:[10.1016/j.iccn.2021.103081](https://doi.org/10.1016/j.iccn.2021.103081)
 19. Hetland B, Hickman R, McAndrew N, Daly B. Factors influencing active family engagement in care among critical care nurses. *AACN Adv Crit Care*. 2017;28(2):160-170. doi:[10.4037/aacnacc2017118](https://doi.org/10.4037/aacnacc2017118)
 20. Kleinpell R, Zimmerman J, Vermoch KL, et al. Promoting family engagement in the ICU: experience from a National Collaborative of 63 ICUs. *Crit Care Med*. 2019;47(12):1692-1698. doi:[10.1097/ccm.0000000000004009](https://doi.org/10.1097/ccm.0000000000004009)
 21. Hetland B, McAndrew N, Perazzo J, Hickman R. A qualitative study of factors that influence active family involvement with patient care in the ICU: survey of critical care nurses. *Intensive Crit Care Nurs*. 2018; 44:67-75. doi:[10.1016/j.iccn.2017.08.008](https://doi.org/10.1016/j.iccn.2017.08.008)
 22. McAndrew NS, Jerofke-Owen T, Fortney CA, et al. Systematic review of family engagement interventions in neonatal, paediatric, and adult ICUs. *Nurs Crit Care*. 2020;27:296-325. doi:[10.1111/nicc.12564](https://doi.org/10.1111/nicc.12564)
 23. Doucette E, Sanzone L, Albahouth A, De Luca W, Santella G, Wang K. The role of technology in enhancing a family-centred approach to care: navigating nurse-family communication in the ICU. *Can J Crit Care Nurs*. 2019;30(3):29-34.
 24. Sousa VD, Rojjanasirat W. Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. *J Eval Clin Pract*. 2011;17(2):268-274. doi:[10.1111/j.1365-2753.2010.01434.x](https://doi.org/10.1111/j.1365-2753.2010.01434.x)
 25. Moule P, Goodman M. *Nursing Research: an Introduction*. Sage; 2009.
 26. Cohen J. *Statistical Power Analysis for the Behavioral Sciences*. second ed. Lawrence Erlbaum Associates; 1988 <http://www.utstat.toronto.edu/~brunner/oldclass/378f16/readings/CohenPower.pdf>
 27. Erlingsson C, Brysiewicz P. A hands-on guide to doing content analysis. *Afr J Emerg Med*. 2017;7(3):93-99. doi:[10.1016/j.afjem.2017.08.001](https://doi.org/10.1016/j.afjem.2017.08.001)
 28. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today*. 2004;24(2):105-112. doi:[10.1016/j.nedt.2003.10.001](https://doi.org/10.1016/j.nedt.2003.10.001)
 29. Fetters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs—principles and practices. *Health Serv Res*. 2013; 48(6pt2):2134-2156. doi:[10.1111/1475-6773.12117](https://doi.org/10.1111/1475-6773.12117)
 30. Brysiewicz P, Chipps J. A survey of next of kin needs of trauma patients admitted to intensive care units in South Africa. *Intensive Crit Care Nurs*. 2017;43:136-142. doi:[10.1016/j.iccn.2017.07.009](https://doi.org/10.1016/j.iccn.2017.07.009)
 31. Wong P, Redley B, Bucknall T. Families' control preference for participation in patient care in adult intensive care. *Intensive Crit Care Nurs*. 2021;62:102953. doi:[10.1016/j.iccn.2020.102953](https://doi.org/10.1016/j.iccn.2020.102953)
 32. Frota OP, de Sene AG, Ferreira-Júnior MA, et al. Coping strategies of family members of intensive care unit patients. *Intensive Crit Care Nurs*. 2021;63:102980. doi:[10.1016/j.iccn.2020.102980](https://doi.org/10.1016/j.iccn.2020.102980)
 33. Thirsk LM, Vandall-Walker V, Rasiah J, Keyko K. A taxonomy of supports and barriers to family-centered adult critical care: a qualitative descriptive study. *J Fam Nurs*. 2021;27(3):199-211. doi:[10.1177/1074840721999372](https://doi.org/10.1177/1074840721999372)
 34. Arnold TC. Moral distress in emergency and critical care nurses: a metaethnography. *Nurs Ethics*. 2020;27(8):1681-1693. doi:[10.1177/0969733020935952](https://doi.org/10.1177/0969733020935952)
 35. McAndrew NS, Schiffman R, Leske J. A theoretical lens through which to view the facilitators and disruptors of nurse-promoted engagement with families in the ICU. *J Fam Nurs*. 2020;26(3):190-212. doi:[10.1177/1074840720936736](https://doi.org/10.1177/1074840720936736)
 36. Naef R, Massarotto P, Petry H. Family and health professional experience with a nurse-led family support intervention in ICU: a qualitative evaluation study. *Intensive Crit Care Nurs*. 2020;102916:102916. doi:[10.1016/j.iccn.2020.102916](https://doi.org/10.1016/j.iccn.2020.102916)

How to cite this article: Price AM, McAndrew NS, Thaqi Q, et al. Factors influencing critical care nurses' family engagement practices: An international perspective. *Nurs Crit Care*. 2022;1-14. doi:[10.1111/nicc.12824](https://doi.org/10.1111/nicc.12824)