Original Article

Comparison of Intensive Care Units (ICUs) Nurses' and Families' Perception of Compliance with Patient and Family Centered Care Principles in ICUs in Ghana

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Abstract

Background: Patient and Family Centered Care (PFCC) is a gold standard care and a top priority for most health care practitioners.
Objective: This study aimed to elicit and compare nurses' and families' perception of compliance with PFCC Principles in intensive care units (ICU) in selected hospitals in Ghana.
Methodology: A comparative descriptive research design was used. Participants were drawn from nurses' (n=123) and family members' (n=111) of hospitalized patients. Data was collected using a "modernized version of a hospital self-assessment inventory on PFCC." The data were analyzed using SPSS version 20.0.
Results: Families had a similar perception of compliance with principles of PFCC. All the nurses (100%) and most families (91.0%) responded that compliance to the principles was on a moderate level.
Conclusions: There is a positive perception towards PFCC, which calls for the formulation of policies in ICUs in Ghana to include PFCC.

Keywords: Patient and Family Centered Care, ICU, Ghana, Nurse

Introduction

The ultimate goal of any health care system is to provide care that results in better health outcomes, improved patient and family experience, better clinician services, and staff satisfaction. Adopting new standards calls for health care institutions to render care that recognizes individual patients and family choices (Peterson, 2009).

Background

"Patient- and family-centered care is an approach to the planning, delivery, and evaluation of health care that is grounded in mutually beneficial

partnerships among health care providers, patients, and families" (Arriola, et al., 2010). Patient- and family-centered practitioners recognize the vital role that families play in ensuring the health and well-being of patients and family members of all ages. PFCC involves families and friends in patient care, using the four fundamental principles of collaboration, demonstrating dignity and respect, sharing information, and encouraging participation in patient care (American Hospital, 2013). PFCC is a major priority for most health leaders, but a considerable gap exists between intention and implementation (Barnsteiner et al., 2014).

The nature of critical care is complex, and this leaves families in a state of distress and confusion. To enable the patient and family to make informed choices, sufficient information must be available to them. Meeting the needs of the family of ICU patients is likely to lead to better outcomes for all concerned, including decreased distress, reduce tension between family and staff, and more attention being paid by staff to patients' needs (Yin King Lee and Lau, 2003). Therefore, it is vital to come to terms what the patients' family members' perception of compliance or Noncompliance with PFCC principles in the care rendered to their patients.

In the current status quo, nursing care in the ICU is based on the disease-centered model of health care. Which means patients are defined in terms of their diseases rather than as individuals with a complex mix of symptoms, fears, and expectations (Kühlbrandt et al., 2014). That is care of the critically ill is still based on tradition and routines which do not consider the patient and family priorities. The disease-centered approach may not address what matters most to patients who differ in their health priorities (Tinetti et al., 2016). This makes it challenging to realize PFCC principles. In the search for what is essential for a patient and family, healthcare professionals need to move towards patient goals, which require a paradigm shift (Delbanco et al., 2001).

The consequence of the lack of consistency and homogeneity of nurses' and patient families' perception of implementing principles of PFCC will be a significant obstacle in realizing PFCC in healthcare and the ICU in particular. So the importance of reaching a similar perception between care providers and clients in this regards should be put into more in-depth consideration. The ICU nurse needs to understand that patient rights and preferences must be truly respected. Unawareness or insensitivity of healthcare personnel, including nurses, can be a severe barrier against shifting towards PFCC. Patients reported clinicians stressed the benefits of interventions more than they discussed the risks and asked patients about their preferences only half of the time (Zikmund-Fisher et al., 2010), which implies that to realize PFCC in practice there is a long way to go. Also, ICU nurses' knowledge, practice, and perception of PFCC are misunderstood.

Healthcare providers confuse patient engagement with compliance or adherence and "imply that patients are said to be engaged when they do what physicians, nurses, and others want them to do" (Sofaer and Schumann, 2013). Without a clear and accurate perception of the principles of PFCC, these healthcare providers may abdicate their responsibility to patients by labeling them as "noncompliant" without making any effort to engage them in developing shared care plans or to understand their perspectives and then blame their patients for poor outcomes (Barnsteiner et al., 2014). Patient and family will then leave the healthcare facilities unsatisfied with the services rendered to them.

Despite the numerous evolving researches into the PFCC in the health facilities, a lot more need to be done mainly in the adult ICU, because, most of the research work is based on pediatrics and the neonatal intensive care units. Few studies conducted in the adult ICU have observed a significant relationship between PFCC and patient and family satisfaction Patient- and family-centered care should, therefore, be extended to patients of all ages and practiced in any healthcare setting (Conway et al., 2006). It is evident that during a critical illness, families' fulfill an additional role for patients who may be unconscious or unable to communicate or make decisions (Mitchell et al., 2009).

Understanding ICU nurse and patient family perceptions of the compliance with the four principles of PFCC will remain an influential

determinant factor for finding weaknesses and getting closer to applying PFCC in critical care units. However, among different factors which are considered as potential barriers of providing PFCC like an ethical dilemma, patient populations, staffing needs, organizational structure and economic trends (Shamloo, 2012), the most destructive ones can be a misunderstanding of PFCC principles by nurses and underestimating the level of importance of family's needs. The researchers have, therefore found it imperative to compare ICU nurses' and families' perception of compliance with the PFCC principles in adult Intensive Care Units.

This study aimed to elicit and compare nurses and families' perception of complying with Patient and Family Centered Care Principles in intensive care units in selected hospitals in Ghana.

Research question: Do nurses, patients, and family in Ghana recognize the need for a Patient- and family-centered care (PFCC)? What are their perceptions towards PFCC?

Hypothesis: We hypothesize that both nurses and patient families in ICUs will comply to the principles of PFCC Ghana.

Methods

Design: The study was a comparative research design. A quantitative method was chosen because it enabled the researchers to assess and explore nurses' and families' perceptions about the compliance with PFCC principles through a "modernized version of a hospital self-assessment inventory on the patient and Family-Centered care" with 32 items. Nurses and patient families were asked to rate on a five-point Likert scale how they think the ICU nurses do on these items. Then the total score calculated to enable researcher for comparison.

Setting: The study was carried out in four general ICUs and three Obstetric ICUs at three teaching hospitals and a regional hospital in Ghana. That is the Tamale Teaching Hospital and Bolgatanga Regional Hospital in northern Ghana. Komfo Anokye Teaching Hospital and the Cape Coast Teaching Hospital were selected from southern Ghana. The intensive care units admit both children and adults with medical, trauma, and surgical with life-threatening conditions with the obstetric ICU admitting only obstetric emergencies.

Participant characteristics: The participants for the study consisted of General Registered Nurses with or without Post Basic Critical Certificate with at least six (6) months working experience in the ICU (Table 1) and that of families of ICU patients with at least forty eight (48) hour stay in the ICU (Table 2). A preliminary audit shows there are about 144 nurses in the ICUs of the selected hospitals and an average bed capacity of 47.

Study Materials: Considering the related researches results and according to statistic advisor suggestion, to have a 95% confidence interval and 90% test power, the calculated sample size for families was 150. The response rate for families was 83% representing 111 questionnaires returned. That of nurses was 85.4% representing 123 staff that was able to participate.

The study tool was a modified version of the hospital self-assessment inventory questionnaire developed by the Institute for Family-Centered Care which was adopted and modernized by Woodruff Health Sciences Center (2008). It includes twenty-five questions definition of patient- and family-centered care and patterns of care in a patient- and family-centered care.

To suit our purpose, additional questions on communication/education from the original version of the tool was added to bring it to a total of 32 questions. The questionnaire also included information on demographic characteristics of nurses and patient families, which included six items for nurses and items for families. Permission was granted from both Woodruff Health Sciences Center and the Institute for Family-Centered Care (IFCC) for the use of the questionnaire (Arriola, et al., 2010).

Items on the questionnaire of the study had a five-point Likert scale in the format; Never, Rarely, Sometimes, Often and Always with their respective scores from 1 to 5. The individual scores were calculated and put into three levels according to total score; low compliance (32 – 73), moderate compliance (74 – 115) and high compliance (>115) with PFCC principles.

Five of the questionnaires were given to faculty members to determine face validity and consistency. The same number was forwarded to 5 ICU nurses in Ghana to ascertain if the tool was applicable in the Ghanaian cultural context. Reliability of this tool was also assessed with a sample of 10 ICU nurse and ten family members' of hospitalized ICU patients.

Data was collected between July 2017 and November 2017. The questionnaires were distributed to nurses to fill at their leisure time. Family members were approached at the periods they were available. The questionnaire was clearly explained, and those who needed guidance were duly assisted.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 20. The data analysis included descriptive statistics, using frequencies, mean, and standard deviation. In order to identify if there were any relationship between participants' demographic features and their perception of compliance with PFCC, one-way ANOVA and Chi-square (χ^2) was used

Ethical approval was obtained from the Ethical Review and Research Committee of Tehran University of Medical Sciences, code: IR.TUMS.FNM.REC.1396.2696.

Permission to collect data from the selected hospitals in Ghana was also obtained from their respective research departments. Oral and written informed consent was obtained from all participants before they participated in the study.

Results

Demographic Characteristics

Nurses: Nurses' demographic characteristics are detailed in Table 1. Most of the nurses were female (60.2%) reflecting the female-dominated nursing workforce. Of respondents, 60 (48.8%) were aged 24-28, 52 (42.3%) were aged between 29-33 years and 11 (8.9%) aged between 34-39years. 63 (51.2%) were married and 60 (48.8) single.55 (44.7%) had a diploma in nursing, 39(31.7%) held Bachelors of Science (BSc) Nursing and 29(23.6%) reported they had a diploma in critical care nursing. With the years of experience in the ICU; majority52.8% (n=65) had less than five years working experience, 41.5% (n=51) had 5 to 9 years of experience, and 5.7% (n=7) had 10 to 15 years of experience in the ICU. None of the participants had in-service training in PFCC.

Families: Families' demographic characteristics are detailed in Table 2. Majority of them were male (61, 55%), with age; 20-29 years 53(47.7), 30- 39 years 48 (43.2) and above 40 years of age 10 (9%). Of this, 51.4% (57) of family members were married, and 47.7% (n=53) were single.

The participants in the study belongs to the following ethnic groups in Ghana; Akan with 48.6% (n=57) responses, Mole Dagomba with 30.6 (n=34), Ga had 9% (n=10), Ewe recorded 7.2% (n=8) and Gonja accounted for the least with 4.5% (n=5). The majority were Senior High School (SHS) graduates with 50.5% (n=56), tertiary education 44.1% (n=49) and primary education was the least with 5.4% (n=6).In terms of relationship to the patient, siblings were the majority with 47.7% (n=53). Patients' spouses were 20.7% (n=23), 13.5% (n=15) were patients parents and 2.7% (n=3) were parents to the patients. The others had 15.3% (n=17).Of family member status in the family, the majority were just common members with 98.2% (n=109), and only 1.8% (n=2) family members headed their families.

Nurses' perception of the components of principles of PFCC: Majority of ICU nurses (90.2%, n=111) scored 20 to 25, which denotes high conformity of Current Status of Care with Definition of PFCC Principles with 9.8% (n=12) indicating it was moderate. On patterns of care, the majority of nurses (82.1%, n=101) scored 52 to 81, indicating it was in moderate conformity with PFCC with 17.9% (n=22) rate it as low. With regards to information/education during care, 65% (n=80) scored from 15 to 23, which indicated a moderate level of compliance with PFCC with the rest rating it as low.

Families' perception on the components of principles of PFCC: Majority of families (59.5%, n=66) scored 15 to 19 which denotes moderate conformity of current status of care with the definition of PFCC principles with 20.7% (n=23) indicating it was low and 19.8% (n=23) view it in high conformity. On patterns of care, 58.6% (n=65) perceived it to be moderate, with 41.4%

(n=46) rating it to be in low conformity with PFCC. With regards to information/education during care, the following scores were recorded. 55% (n=61) scored from 15 to 23 means moderate level, 37% (n=42) scored from 6 to 14 which shows low conformity and only 7.2% (n=8) scored above 23 which is desired high level.

Table 1 Demographic characteristic of nurses

Demographic	Frequency (f)	Percentage (%)
Nurses Age (years)		
24 - 28	60	48.8
29 - 33	52	42.3
34 - 39	11	8.9
Sex		
Female	74	60.2
Male	49	39.8
Marital status		
Married	63	51.2
single	60	48.8
Level of Education		
Diploma	55	44.7
Post Diploma	29	23.6
Bsc Nursing	39	31.7
Experience (years)		
1-4	65	52.8
5-9	51	41.5
10-15	7	5.7
In-service training on PFCC		
No	123	100
Yes	0	0

Table 2 Demographic characteristics Families

Demographic	Frequency (f)	Percentage (%)
Age (years)		
20-29	53	47.7
30-39	48	43.2
More than 40	10	9
Gender		
Male	61	55
Female	50	45
Ethnicity		
Akan	57	48.6
Ewe	8	7.2
Ga	10	9
Gonja	5	4.5

Mole Dagomba	34	30.6
Marital status		
Single	53	47.7
Married	57	51.4
Divorce	1	0.19
Educational Level		
Basic (primary- JHS)	6	5.4
SHS	56	50.4
Tertiary	49	44.1
Relationship to patient		
Parent	15	13.5
Sibling	53	47.7
Spouse	23	20.7
Child	3	2.7
Others	17	15.3
Status in family		
Head	2	1.8
Member	109	98.2
Other	0	0

Table 3: Nurses' and Families' scores on the components of principles of PFCC

Nurses Score	**Frequency (f)**	**Percentage (%)**
Definition of PFCC principles		
5 -14 (Low)	0	0
15 – 19 (Moderate)	12	9.8
20 – 25 (High)	111	90.2
Pattern of care on PFCC		
21 – 51 (Low)	22	17.9
52- 81 (Moderate)	101	82.1
>81 (High)	0	0
Information/Education during care		
6 – 14 (Low)	43	35
15 – 23 (Moderate**)**	80	65
>23 (High)	0	0
Totals		
32 - 73 (Low)	0	0
74 – 115 (Moderate)	123	100
>115 (High)	0	0
Families Score	**Frequency (f)**	**Percentage (%)**

Definition of PFCC principles 5 -14 (Low) 15 – 19 (Moderate) 20 – 25 (High)	 23 66 22	 20.7 59.5 19.8
Pattern of care on PFCC 21 – 51 (Low) 52- 81 (Moderate) >81 (High)	 46 65 0	 41.4 58.6 0
Information/Education during care 6 – 14 (Low) 15 – 23 (Moderate**)** >23 (High)	 42 61 8	 37 55 7.2
Totals 32 - 73 (Low) 75 – 115 (Moderate) >115 (High)	 9 101 0	 8.1 91.9 0

Table 4: Comparing nurses' perception to families' perception about compliance with PFCC principles in adult intensive care in 3 subcategories

Subcategories on PFCC	Mean	Standard Deviation	Standard Error	Independent T-test& p-value
PFCC definition (Nurses)	21.48	1.62	0.14	T=14.31
PFCC definition (Families)	17.23	2.81	0.26	***P value=0.00**
PFCC patterns of care (nurses)	57.04	5.60	0.50	T=3.03
PFCC patterns of care (families)	54.48	7.23	0.68	P value=0.3
PFCC Information/education (nurses)	15.18	2.36	0.21	T=4.09
PFCC Information/education(families)	16.99	4.21	0.39	P value=0.2

Perception of nurses' and families' total scores on components PFCC: Nurses recorded 100% (n=123) representing scores from 74 to 115, which implies moderate compliance with PFCC principles in the ICU. Families, on the other hand, had 91% (n=101) perceiving it as moderate with 8.1% (n=9) reporting it was low.

Relationship between nurses' and families' perception: According to an independent t-test, there is statistically significant (p-value=0.00) difference between nurses' and family members' scores on the definition of PFCC in conformity with PFCC principles. The scores between nurses' and families' on the patterns of care recorded a p value=0.3, meaning there is no statistically significant difference between them. Also, there was no statistically significant difference between nurses' and families' score on information/education in conformity with PFCC principles (p value=0.2).

Discussion

The study examined the perceptions of complying with PFCC in the ICU held by nurses and families. The strengths of the study included the use of the same instrument for both nurses and families, which allowed for direct comparisons of PFCC perceptions. Participants' responses are likely to be illustrative of their respective populations.

The findings agreed with the hypothesis of the study, suggesting that nurses' and families' responses to compliance with the principles of PFCC were generally similar. Both nurses (100%, n=123) and families (91.0%, n=101) responded that compliance with the PFCC principles was moderate in the adult ICUs

The nurses' rated the care highly in the ICUs of the selected hospitals in Ghana were moderately in conformity the principles of PFCC by unanimously (100%, n=123) perceiving it as high. It was perceived that all the elements of patient and family-centered care were present to some extent in their everyday practice (Murphy and Fealy, 2007). It was perceived that families' were provided with information in order to make informed choices regarding the patient's care and that family members were given information about follow-up care and were supported in obtaining information through educational materials (Almaze and de Beer, 2017).

In the current study, only nurses' perception of compliance with PFCC principles was elicited without actually taken into consideration the nursing activities they perceived to be present in their current nursing practices. Coyne and colleagues in their study demonstrated that there could be significant differences between practices and perceptions of the patient and family-centered care (Coyne et al., 2013). This means that the Ghanaian nurses may report moderate compliance with PFCC principles, but it cannot guarantee the same in practice.

Families also perceived nursing in the ICU to be moderately in conformity the principles of PFCC. It was perceived that nurses acknowledge their individuality, conveying respect and dignity, and their partnering in care. Daily nursing care was perceived to occur 59.5% of the time on the definition of PFCC principles, and 20.7% felt nurses were not doing enough. This was consistent with previous literature in a study on "Insights into Patient and Family-Centered Care through the Hospital Experiences of Parents in Europe" (Uhl et al., 2013). The findings in the current studies suggest information sharing was high, families' scoring even higher than the expectations of nurses. Similar to Balbino and others on the measurement of family-centered care perception and parental stress in a neonatal unit, where it was also reported average scores on areas of care from families (parents) on their perceptions about PFCC with substantial positive results to the domain of Collaboration (Balbino et al., 2016).

However, the finding in the current study was contradictory to the study in the United Kingdom, where families reported a feeling of frustration, disappointment, and anger with their engagement with the nursing staff. Nurses were criticized on the pattern of care and the different pieces of advice or information given to families (Finlayson et al., 2014). However, this difference may be as a result of their study setting, which was in the neonatal intensive care unit where family members (mothers) could have been more emotionally attached to the newly born.

On the three subscales, both nurses and families perception of compliance with PFCC principles in the adult in the intensive care unit was compared. The first comparison highlighted responses to the definition of PFCC principles. Responses to the definition of PFCC were different between nurses and family members. Nurses perceived their care to be high than that of families in contrary to the evidence in previous studies that families perceived care on the definition of PFCC principles higher than health care professionals. Example, a study in Australia made a comparison of perceptions of the patient and family-centered care by health professionals (nurses, doctors, and allied health staff) and parents of hospitalized children. It was reported that families appreciated care on PFCC than staff by reporting higher scores on the perceptions of the patient and family-centered care scale (Gill, 2014 #265).

In comparison to nursing care on the patterns of care in the ICU, the two groups were similar despite the differences in percentages. According to independent T-test, there was no statistically significant difference between two groups perceptions (P=0.3). Both nurses and families perceived the pattern of care to be moderately closer to the ideal PFCC principles. That is both parties averagely agreed that visitation, family remaining with the patient, open disclosure regarding errors, help in the transition of care and discharge planning were partially in line with PFCC principles. This was in support of the findings in a study at Emory in the United States which results indicated that patients/families and service providers did not significantly differ in their overall perceptions of how care was done in terms of the critical indicators of PFCC and the critical indicators of care delivery (Arriola, et al., 2010).

With regards to comparison about information sharing/ education, both nurses and families also shared similar perceptions. The two groups responded that information/education was moderate in a relationship with the principles of PFCC. According to independent T-test, there was no statistical significance between the two groups perceptions (P=0.2). This support the literature review conducted by Adams and associates on nurses' communication with families in the ICU where their findings indicated that most nurses consider communication with a patient family to be significant (Adams et al., 2017). Families with a critically ill patient also had a positive appraisal that nursing care support the need for communication in the ICU (Malliarou et al., 2014). A plus to the Ghanaian nurse was 7.2% (n=8) family responded these were high. There is the need for further qualitative investigations that may enable us to further understand the current situation and advance our understanding of whether a favorable environment exists in the ICUs in Ghana to implement PFCC.

Conclusion

The study results showed similarities between nurses' and families' perceptions of care status. Both perceived the nursing care patterns to be moderate compared to the principles of PFCC. Unfortunately, most of the studies used to support the finding in this study were conducted in contexts that is different from the current study's context. It is therefore essential to replicate this research in other countries with similar cultures and economic parameters. Further exploration is also recommended to understand the results of the current studies and advance the possibility of implementing PFCC in Ghana.

Abbreviations

FCC: Family-Centered Care

FINC: Families in Nursing Care

ICU: Intensive Care Unit

NICU: Neonatal Intensive Care Unit

PFCC: Patient and Family Centered Care

SHS: Senior High School

Bsc: Bachelor of Science

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