Family Nursing Practice and Family Importance in Care in Intensive Care Units: Perspectives of Nurses working in Intensive Care Units

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Abstract
The analysis of family-focused nursing practice is fundamental for advancing family nursing in intensive care settings, yet this area remains less studied in sub-Saharan Africa. Nurses’ attitudes presuppose an assessment of what nurses are willing to do and objection of certain practices. The purpose of this study was to assess the correlation between family nursing practice and nurses’ attitudes towards family importance in care in adult intensive care units (ICU). A cross-sectional study was conducted among 116 nurses working in adult intensive care units using census sampling method. The instruments used for data collection included the Family Nursing Practice Scale (FNPS) and the Family Importance in Care-Nurses’ attitudes (FINC-NA). The mean score of FNPS was 38.7±12.7 whilst the mean score of FINC-NA was 90.6±14.7. The Pearson’s product-moment correlation revealed a positive relationship was revealed between FNPS and FINC-NA (r=0.6; p<0.01) The findings identified that most ICU nurses had a positive attitude towards family importance in care though their family nursing practice was moderate. In attempt to reach desirable nursing practice, it is recommended to develop practical and educational strategies aimed at improving of family care. This is especially useful to families in sub Saharan countries were families play a vital role in caring for the patient during admission and after discharge.

Background
The need for intensive care services and survival from critical illnesses continue to increase (Maguire & Carson, 2013). This is due to advances in intensive care, expansion of capacity to cater for the ongoing novel coronavirus virus disease 2019 (COVID-19) pandemic and the increasing older population. Consequently, as the number of patients requiring treatment in Intensive Care Units (ICU) increases, a proportional number of family members will experience the journey of admission of a family members in ICU (Hetland, Hickman, McAndrew, & Daly, 2017). Nurses will have more encounters with the patients’ families. As such, it is imperative for nurses to recognize these trends and to support the families using various interventions. This calls for more demands on nurses to utilize family nursing practices in all care settings (Simpson & Tarrant, 2006).
Critical illnesses or injuries not only affect the patient. They also have substantial impact on the whole
family, owing to the fact that the patient forms half of the patient while the other half is the patient’s family unit (Bell, 2013). Occasionally, illness of one of the family members influences the family’s health, perceptions and behaviors in various ways (Minton, Batten, & Huntington, 2018; Oliveira et al., 2011). The family-ICU journey is characterized by various family experiences. Initially, the family floats in a turmoil of unpleasant emotional responses to illness. Family members probe to understand the illness and complex treatment plans. (Imanipour, Kiwanuka, Akhavan Rad, Masaba, & Alemayehu, 2019). The unfamiliar ICU environment also exposes the family to psychosocial stress an unfamiliar visitation practices (Barth et al., 2016). Following discharge from ICU, the family further experiences a combination of psychological disorders termed as Post-Intensive Care Syndrome-Family (PICS-F) (Kiwanuka & Rad, n.d.).

Nurses and other ICU personnel should recognize the importance of fulfilling family needs (Olding et al., 2016). Meeting family healthcare needs is a cardinal goal of family nursing. It is a way of thinking about and working with families (Kaakinen, Coehlo, Steele, & Robinson, 2018). Family nursing practice (FNP) can be observed in various ways such as involving the family in care planning, direct delivery of care, and evaluation of health care in a mutualistic relationship that benefits both healthcare providers and families (Finlayson, Dixon, Smith, Dykes, & Flacking, 2014). Other practices include psychosocial and informational support (Al-Mutair, Plummer, Clerehan, & O’Brien, 2014; Gaeeni, Farahani, Seyedfatemi, & Mohammadi, 2014). Perception of family nursing practice is correlated with various factors. FNP is correlated with clinical experience, empathy and supportive attitude towards the importance of family in care (Hsiao & Tsai, 2015).

Nurses’ positive attitudes towards family importance in care can be observed through promotion of effective relationships with the family, commitment, appreciation, and effective communication with the family (Oliveira et al., 2011). Since nurses have the most frequent encounters with the patient’s family; their attitude towards family importance in care could translates into their understanding of family members concerns and the importance of integrating families into care processes. This generates practices that are more conducive to the functional empowerment and supportive to the families (Gusdal, Josefsson, Thors Adolfsson, & Martin, 2017). Furthermore, the family also has a vital
role in caring for hospitalized patients (Tabootwong & Kiwanuka, 2020). Indeed, there is notable advocacy for consideration of the family as an important component of care across care settings. The International Family Nursing Association (IFNA) advocates for and has outlined competencies for nurses in attempt to enhance family importance in care (Association International Family Nursing, 2015). Nonetheless, family nursing practice is seldomly realized in acute care settings (Kiwanuka, Shayan, & Tolulope, 2019). This is partly influenced by nurses’ attitudes towards family importance in care (Bell, 2013; Curtis, Downey, & Engelberg, 2016; Harris, 2016). Luttik (2017) argued that an effective encounter between nurses and family members is notably influenced by attitude of nurses towards family importance in care. Additional research highlighting the link between FNP and FINC-NA needs to be nuanced. Therefore, this study aimed to assess the correlation between family nursing practice and nurses’ attitude towards family importance in care in adult intensive care units. This study adds to the growing body of literature emphasizing family nursing practice and family importance in care. To the best of our knowledge, this was the first study to report on the family nursing practice and nurses’ attitude towards family importance in care in adult ICUs of Uganda. This could be an initial step that avails evidence needed to advocate for more family centeredness of care and policy.

Methods
Design
A cross-sectional design using a descriptive-correlational approach was adopted.
Participants
The study population composed of nurses who have worked in ICU for more than 6 months. Census sampling was used to recruit nursing staff. A minimum sample of 92 nurses was required to have a representative sample according to Krejcie and Morgan’s table (Krejcie & Morgan, 1970). Totally, 116 eligible nurses participated in the study.
Procedure
For data gathering, information about the study and an inviting notification to participate was sent to the eligible ICU staff in all 13 hospitals with functional intensive care units in Uganda. Participation in the study was entirely voluntary. After voluntarily signing the written informed consent form, the
participants could then complete the self-administered questionnaires. Participants chose to complete the questionnaires either using paper and pencil format or online. Confidentiality of personal data was maintained. Data was stored in a database without identifiers and was not shared with any person outside the research group. Data collection was carried out from March to April 2019.

Research Instruments

Two tools were used for data collection in this study, these included the Family Nursing Practice Scale (FNPS) (Toyama, Kurihara, Muranaka, Shirai, & Kamibeppu, 2017a) and the Family Importance in Nursing Care - Nursing Care (FINC-NA) (Benzein, Johansson, Årestedt, Berg, & Saveman, 2008). Permission to use the tools was sought from authors of the original tools. The FNPS was used to assess family nursing practice. The tool has 15 items ranked on a 5-point likert scale ranging from 1 to 5 (never do to always do). The tool was developed in Japan in 2017 to assess family nursing practice. The minimum score of the tool is 15 while the maximum score of the tool is 75. Higher scores indicate better family nursing practice. The FNPS tool has a reliability of Cronbach’s alpha = 0.94 overall (Toyama, Kurihara, Muranaka, Shirai, & Kamibeppu, 2017b). In our study the internal consistency of the FNPS scale was assessed using the Cronbach’s alpha coefficient (α), the tool had an α = 0.85 in our study.

The FINC-NA (Benzein, Johansson, Arestedt, & Saveman, 2008) was used to assess nurses’ attitude towards family importance in care. The tool was developed in Sweden, it has 26 items in four subsections assessing: (a) family as a resource in nursing care (Fam-RNC) (10 items, α = 0.80); (b) as a conversational partner (Fam-CP) (8 items, α = 0.78) (c) family as a burden (Fam-B, 4 items, α = 0.69) and (d) family as its own resource (Fam-OR) (4 items α = 0.7). The responses in the tool are based on a five-option Likert scale varying from completely agree (score 4) to completely disagree (score 1). The total score of the tool ranges from 26 (minimum) to 130 (maximum) with higher scores reflecting more positive attitudes of nurses towards family importance in care (Benzein, Johansson, Arestedt, et al., 2008). Scores for the Fam-B subscale were reverse scored before analysis as recommended (Blöndal et al., 2014; Svavarsdottir & Gisladottir, 2018). The tool has good psychometric properties with an internal constancy of α = 0.88. In our study, the internal consistency of the FINC-NA scale was
assessed through the Cronbach’s alpha coefficient, obtaining an $\alpha$ of 0.864. The questionnaires which were used in this study were in English that is compatible with the official language of the participants.

**Ethical Considerations**

Ethical approval was sought from the Ethics Committee of Tehran University of Medical Sciences (IR.TUMS.FNM.REC.1397.197) which funded and supported the study and the Research and Ethics Committee of Clarke International University, Uganda (UG-REC-015) were the study took place. Informed consent, voluntary participation and confidentiality were observed at all times. All potential participants were given detailed, written information about the purpose of the study and the data collection procedure using an information sheet. Data was stored without personal identifiers to ensure anonymity.

**Data analysis**

Data analysis was done using SPSS software (version 16; SPSS Inc., Chicago, IL, USA). Descriptive statistics including means, standard deviations, and frequency distributions were used for description of the study population and the main variables (FNPS and FINC-NA). Pearson’s correlational coefficient was used to assess the correlation between FNPS and FINC-NA, after approving normality with Kolmogorov-Smirnov test ($P>0.05$). To compare differences in attitude and family nursing practice according to background variables, Student t-test and ANOVA were used. The significance level was set at $P<0.05$.

**Results**

A total of 116 participants fully completed the study. The mean age of the respondents was 29.4 (SD = 3.9). More than half of the sample was female. The mean working experience was 6 years (SD = 3.4) and the mean ICU experience of the respondents was 3.5 years (SD = 2.6). Comparison of education level of the sample showed most respondents had attained a nursing diploma as their highest education (52.6%). Most respondents were working in general ICUs (62.1%) followed by those who worked in specialist medical, surgical and cardiac ICUs. All nurses worked in rotating shifts (morning, evening and night). Most nurses had never had experience of a loved one admitted in ICU and almost all nurses (90.5%) had never had any form of training, courses or conferences in family
nursing.

Family nursing practice

Insight into mean subscale scores on the FNP scale for the sample is shown in Table II. The mean FNP score was 38.7 (SD = 12.7). Descriptive analyses of FNP showed that the item “I support the family when they express their feelings” had the highest mean score, whilst the item “I try to create opportunities to converse with the family” had the least mean score (Table I). The mean score of the total FINC-NA Scale was 90.6 (SD = 14.7), the total FINC-NA scores obtained varied from 74 to 117 (Table III). Comparative analyses showed that there was a statistically significant positive correlation between FNPS and FINC-NA ($r = 0.6$, $p<0.01$).

Discussion

Nurses ought to be supportive to the family and should have a positive attitude towards family importance in care across care settings (Angelo et al., 2014; Liput, Kane-Gill, Seybert, & Smithburger, 2016). Evidence on family nursing practice and nurses’ attitude towards family importance in care is useful in informing interventions, policy changes and practice needed to support the family across care settings (Benzein, Johansson, Arestedt, et al., 2008; Blöndal et al., 2014). Nurses in our study had moderate family nursing practice. This could implies that nurses are somewhat supportive to the families in adult intensive care units. However, the indication that they rarely create opportunities to communicate with the family could mean that they do not often invite and include families in nursing care. Understaffing in ICU that leaves nurses with no time to often attend to both the critically ill patients and the family. On another hand, it could also be attributed to lack of training in family nursing. Indeed, we identified that nurses had no training in family nursing through CPDs or other forms of training. This leaves nurses with lack of preparation to assess, and support the family.

Research findings highlight that family-focused nursing interventions are limited in the intensive care setting (Benzein, Johansson, Arestedt, et al., 2008; Fernandes, Gomes, Martins, Gomes, & Gonçalves, 2015; Wright & Leahey, 2012). This suggests that more family nursing interventions should be implemented in such care settings. Emphasis on a collaborative relationship between healthcare providers, patient and their family is rooted in the family nursing. The patient and their family must
receive support from healthcare providers, relatives and friends during their stay and after discharge from the hospital. However, this is might not always be the case. Other subscales FNPS revealed nurses had the low average scores on the subscale “awareness of what the family considers to be important in their interactions”. This could partly be attributed to the busy schedules and due to under staffing. This makes nurses to be overwhelmed by responsibilities of caring for patient and leaves them with less or no time for caring for patients’ family in ICU. Nurses need to interact with the patients’ family from the first encounter with the patient. This can help in involving and supporting the family while being aware of who they are and their needs.

Nurses held positive attitudes towards family importance in care. A positive attitude indicates that nurses acknowledge the relevance of supporting the family, having a collaborative relationship with the family and considering family needs in critical care settings. This finding replicates those other studies among nurses across care settings in developed countries (Benzein, Johansson, Arestedt, et al., 2008; Fernandes et al., 2015; Luttik et al., 2017; Saveman, Benzein, Engström, & Årestedt, 2011). Nonetheless, with considering family nursing practice, there is space for more family centeredness of care. Nurses having positive attitudes are likely to implement family nursing practice. Such a view is reflected in our study by a positive correlation between FNP and FINC-NA. In practice, this finding could have various implications; attitudes presuppose an assessment of what nurses are willing to do and their objections towards certain nursing practices (Oliveira et al., 2011). Nurses may consider attitudes congruent with work culture and those of their colleagues (Hoplock, Lobchuk, Dryburgh, Shead, & Ahmed, 2019) and family nursing practice could be influenced by nurses’ attitudes towards the family’s importance in care in critical care settings. Family nursing interventions at pre-licensures to inservice level are needed to mold how nurses view and react towards families in critical care settings.

Limitations of the study
In this study, practice of nurses in family care was assessed through self-report. Although we minimized such limitation by requesting respondents to answer the questionnaire with utmost honesty based on reality, it is recommended to measure FNP through performance assessment
methods in another study to minimize the possible bias from self-rating of one’s own behaviors.

Strengths of the study
The results of the study must be interpreted with respect to its strengths. A representative sample from different hospitals and census sampling used in this study makes the generalisability of the findings reliable and could give a good interpretation of the data in the perspective of FNP and FINC-NA in critical care settings of Uganda. It is hoped that the findings will be a useful addition to the growing body of literature highlighting FNP and FINC-NA in adult intensive care units.

Recommendations
Interventions to improve family nursing practice in critical care settings be investigated in other studies. Such interventions should integrate different strategies aiming at integration of the clinical staff and patients’ family members to effectively meet the families’ needs during admission and following discharge from ICU. Including family nursing with its components for critical care in curriculum of nursing can develop more positive attitudes, confidence and motivate nursing students to effectively respond to patients’ relatives needs in the future. Continuous professional development trainings including all aspects of the family nursing should be carried out for ICU nurses. Development of official family nursing position statements in Ugandan, as well as International nursing and medical organisations should be considered in order to clarify the current national and international recommendations on family nursing practice.

Conclusion
This study, as the first study with regard to family care in Uganda, revealed that most nurses had positive attitude towards family importance in care however, in most instances their practice of family nursing is moderate. Comparative analyses identified that there is a positive correlation between nurses’ attitude towards family importance in care and family nursing practice, by emphasizing on involvement of families in care through effective training courses, there is good prospect for improvement of nursing practice about families. It is vitally necessary in sub-Saharan countries.

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Declarations
Competing Interests
The authors declare no competing interests

Author Biographies

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Masoomeh Imanipour, BSc. & MSc. in nursing; MSc & PhD in medical education, is faculty member of Critical Care Nursing and Management Department in Tehran University of Medical Sciences (TUMS). Also, she is member of Nursing and Midwifery Care Research Center of TUMS. She has experience in critical care nursing specifically with the cardiovascular system. Her research filed is family care and her scholarship focuses on development of educational interventions and family-centered care. The recent publication includes “Effect of programmed family presence in coronary care units on patients' and families' anxiety” in the Journal of Caring Science, in press.

Tables

Table I. The family nursing practice of nurses in ICU
### Practice

**Factor 1: Active Support for the family**

| Item                                                                 | Mean (SD) |
|----------------------------------------------------------------------|-----------|
| I Support each family                                               | 2.48 (1.1) |
| I tell the family I am their supporter                              | 1.68 (1.08) |
| I am a worker who understands how the family truly feels            | 2.09 (1.2) |
| I communicate purposefully with the family                          | 2.28 (1.2) |
| I take the initiative to approach the family                        | 2.19 (1.1) |
| I try to create opportunities to converse with the family           | 1.6 (1.1)  |
| I try to see things from the family’s perspective when I talk to them| 1.97 (1.1) |
| I support the family when they express their feelings               | 2.76 (1.1) |
| I encourage the self-expression of the family                       | 2.54 (1.2) |
| I intervene in the family’s problems                                | 1.80 (1.1) |

**Factor 2: Support given with the awareness of the family’s situation**

| Item                                                                 | Mean (SD) |
|----------------------------------------------------------------------|-----------|
| I want to be aware of what the family considers to be important in my interactions with them | 1.67 (1.08) |
| I always keep the family in mind from the first                      | 2.35 (1.3) |
| I express my appreciation to the family                              | 2.0 (1.1)  |
| I provide support while being aware of my influence on the family    | 2.03 (1.1) |
| I understand the health status of the family                         | 2.53 (1.1) |

**Overall FNPS mean scores**

| Overall FNPS mean scores | 38.7 |

**Table II.** Mean score of Family nursing Practice according to background variables
| Background variables                  | Attributes          | M(SD)     | p-value |
|---------------------------------------|---------------------|-----------|---------|
| Age                                   | 20-30               | 42.2(13.2)| <0.001 |
|                                       | 30-50               | 32.8(9.4) |         |
| Total working experience              | 1 to 6              | 40.7(13.5)| 0.013   |
|                                       | Above 5             | 34.5(9.7) |         |
| Experience in ICU                     | 1 to 3              | 39.45(14.1)| 0.460 |
|                                       | Above 3             | 37.7(10.7)|         |
| Gender                                | Male                | 40.5(12.4)| 0.308   |
|                                       | Female              | 37.9(12.7)|         |
| Education                             | Nursing enrolment   | 41.4(12.7)| 0.123   |
|                                       | Nursing Diploma     | 39.21(13.4)|       |
|                                       | BNS                 | 34.6(9.9) |         |
| Healthcare setting                    | Institutional care  | 38.8(12.7)| 0.528   |
|                                       | Primary care        | 35.7(11.5)|         |
| ICU type                              | General ICU         | 39.7(13.6)| 0.375   |
|                                       | Medical ICU         | 38.8(11.1)|         |
|                                       | Surgical ICU        | 37.67(12.3)|       |
|                                       | Cardiac ICU         | 32.83(8.6) |         |
| Shift                                 | Rotating shift      | 38.6(12.7)|         |
| Ever had a family member in ICU       | Yes                 | 38(10.1)  | 0.823   |
|                                       | No                  | 38.7(13.1)|         |
| Ever attended CPD courses on family nursing | Yes            | 42.6(12.4)| 0.277   |
|                                       | No                  | 38.2(12.7)|         |

Table III: Distribution of the total score of the FINC-NA scale (n=116)

| Coefficients                          | Value   |
|---------------------------------------|---------|
| Minimum                               | 74      |
| Maximum                               | 117     |
| Mean                                  | 90.6    |
| Standard Deviation                    | 14.7    |
| Median                                | 92      |
| Skewness Coefficients                 | 0.4     |