Essential Care Needs for Patients' Family Members at the Intensive Care Units in Palestine

Abstract

Background: Understanding the needs of families of hospital patients, especially those in intensive care units is key to providing comprehensive, effective support. The aim of this study is to determine the needs of families of Intensive Care Unit (ICU) patients in four Palestinian hospitals. **Materials and Methods:** This was a cross-sectional, analytic study including 240 participants selected using convenience sampling. Data was obtained from participants from September 2016 to April 2018. The Critical Care Family Needs Inventory (CCFNI) was distributed to examine their needs. Descriptive analysis, *t*-tests, and Analysis of Variance (ANOVA) were conducted to analyze relationships between demographic characteristics of respondents and their needs. Differences were considered significant at $p < 0.05$. **Results:** The results revealed that the assurance domain was the most important, but participants had some unmet needs from the support domain. Parents reported higher levels of importance of all needs than other types of relatives of patients. In addition, participants with a higher level of education reported a significantly higher level of importance in the dimensions of assurance ($F_{3,236} = 2.85$, $p = 0.038$), proximity ($F_{3,236} = 4.36$, $p = 0.006$), and support ($F_{3,236} = 4.13$, $p = 0.007$). Also, married participants had a higher need for all dimensions. Family members of patients who stayed more than 7 days had higher needs for support ($F_{2,237} = 3.39$, $p = 0.035$) and comfort ($F_{2,237} = 3.92$, $p = 0.021$). **Conclusions:** Family members of ICU patients have certain unmet needs, which require attention from healthcare professionals and administration in Palestinian hospitals. In addition, sociodemographic variables influence family member needs.

Keywords: *Family, health services needs and demand, intensive care units*

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Introduction

Understanding the needs of family members of hospital patients, especially those in Intensive Care Units (ICUs), is the key to providing comprehensive and effective support to this group. These family members usually experience stress, anxiety, and other kinds of challenges and concerns.[1-3] The source of this stress may be due to the high fatality rate of patients receiving intensive care,[4] but may also be a result of a lack of knowledge about the course of their loved one's illness. On the other hand, some ICU patients' family members are involved in the care process in that they are often required to speak on behalf of unconscious patients[3]; therefore, it is vital for their needs to be taken into consideration.[4,5] Meeting the family members' needs may significantly help in reduction possibility of developing Post-Traumatic Stress Disorder (PTSD). This disorder is common among those family members involved in the decision-making process.[6,7]

It is especially important to study the needs of these families in each specific context, considering the differences between family roles, responsibilities, and types of relationships between different cultures around the world. Khalaila (2013) measured family member satisfaction in relation to met and unmet needs in an ICU in Israel, including Palestinian participants. The study found that family member satisfaction was positively associated with meeting family member needs in all categories except information needs. In addition, information satisfaction and decision-making satisfaction were linked to meeting both information and emotional support needs.[8] This reiterates the importance of understanding and addressing needs of family members of ICU patients. Similar studies have been conducted in

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Jerusalem, Brazil, and Saudi Arabia[8-11]; however, there is some indication that family roles and processes are unique in the Palestinian context due to the accumulated trauma of living for many years under occupation. For example, in a systematic review in the Middle East on youth and family health, Nelson *et al*. (2015) found that Palestinian populations have especially high rates of PTSD.[12] Since PTSD is also common in families with critically ill members, it is likely that this compounded stress results in less positive family health outcomes if sensitive, targeted interventions are not available.[6,7] On the other hand, Palestinian families have hard-earned strengths, including the ability to create cultures of care within the family and community, practicing patience and persistence, and holding morals and beliefs around collectivism, compassion, and determinism.[13] Thus, the aim of this research study was to assess the needs of Palestinian ICU patients' family members in order to suggest changes in nursing practices that might alleviate some of their stress. In addition, the study aimed to determine the relationship between certain sociodemographic categories and the needs of these family members.

Materials and Methods

This study used a cross-sectional and analytic design and was conducted from September 2016 to April 2018. Convenience sampling was used, where the sample size was calculated with Z1 and Z2 set to 1.96 and 0.85 for a 95% confidence level and 80% statistical power, while the margin of error was set to 0.05. A sample of 240 family members from four major hospitals in northern, southern, and central Palestine was taken. All four hospitals are similar in their characteristics, where ICU bed capacities range from 5 to 10 beds, accounting for 10%–15% of total beds in the hospitals. The nurse to patient ratio in all ICUs was approximately 1:2 and visiting hours are once in the morning and once in the evening for one hour each period. Inclusion criteria were that the participant be at least 18 years old with the ability to read and have a significant relationship with an ICU patient (including parents, spouse, children, siblings, or grandson/granddaughter). Prospective respondents with physical disabilities like deafness, blindness, or mental problems, and the patients' family member had been admitted to ICU less than 24 h prior to the time of survey were excluded from the study.

The Critical Care Family Needs Inventory (CCFNI) was used as an instrument to conduct the study, which was supplemented by a section gathering sociodemographic data (age, gender, conjugal status, educational background, occupation, and economic status). The CCFNI is a 4-point Likert Scale-type questionnaire composed of five categories/domains with 45 items. The categories include the following needs: support (14 items), comfort (6 items), information (9 items), proximity (9 items), and assurance (7 items).[14] The needs statements are rated from one to four, with one being "not important" or "unmet" and four being "very important" or "always met." A previous study was performed to assess the construct validity, test–retest reliability, and internal consistency of this questionnaire. The questionnaire was distributed to five university faculty members who were asked to provide feedback, and another seven university faculty members offered significant comments that were added later to finalize the questionnaire.

A pilot study was done on ten participants to measure their understanding of the questionnaire and to determine if modifications were needed. The total CCFNI internal consistency Cronbach's alpha coefficient for this study was 0.92. The participants received an Arabic language version of the CCFNI. Sociodemographic data was also completed in Arabic before the questionnaire was administered. To complete the questionnaire, the survey administrators made efforts to contact each potential respondent providing transparent explanations of concerns about the anonymity of the survey responses, and to ensure respondents of their confidentiality, and, finally, to obtain the consent of the participants. Analysis was performed using SPSS Version 21 (SPSS Inc, Chicago, IL, USA). Descriptive statistics were obtained for demographic data and questionnaire items including frequencies and percentages as well as mean scores for questionnaire items. Analysis was conducted to assess the relationship between demographic characteristics and needs using *t*-tests and ANOVA and differences were considered significant when the *p* value was less than 0.05 ($p < 0.05$).

Ethical considerations

The research study was approved by the administrations of the hospitals as well as from the Helsinki Palestinian Health Research Council (Ethics code: PHRC/HC/166/16), approval in 2016. A consent form in Arabic was given to each participant including a statement informing the potential participant that he/she had the right to accept or decline participation at any time without consequence. The study was explained thoroughly and the consent form was kept separate from the questionnaire in order to maintain confidentiality.

Results

Overall, more than half of the respondents in the current study were male (57.92%). Approximately, two-thirds (60.84%, *n* = 146) of the family members were aged between 18 and 45 years and 62.18% (*n* = 149) were married. Although many of the families (32.92%) reported that they had baccalaureate-level qualifications, 54.75% (*n* = 129) of all family members interviewed were unemployed. Almost one-third of the respondents (29.17%) were the patients' children. About half of the patients stayed more than 3 days in the ICU. Demographic results are shown in Table 1.

Needs were rated as to importance and whether they were met. Overall, 57% of the needs assessed were designated

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Table 1: Demographic Characteristics and Analysis

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Variable	N (%)	Mean score (SD)				
		Information	**Proximity**	**Assurance**	**Support**	**Comfort**
Gender						
Male	139 (57.92%)	3.39 (0.59)	3.41 (0.56)	3.49 (0.60)	3.29 (0.60)	3.25 (0.79)
Female	101 (42.10%)	3.46 (0.45)	3.44 (0.47)	3.58 (0.56)	3.30 (0.58)	3.32 (0.61)
Independent *t*-test						
t (df*)		1.01 (238)	0.54 (238)	1.36 (238)	0.71 (238)	0.13 (238)
(*p*)		0.315	0.588	0.176	0.476	0.901
Age						
18-30	85 (35.42%)	3.40 (0.46)	3.51 (0.44)	3.54 (0.44)	3.35 (0.56)	3.30 (0.71)
31-45	61 (25.42%)	3.46 (0.54)	3.32 (0.53)	3.56 (0.53)	3.30 (0.60)	3.33 (0.76)
46-59	46 (19.17%)	3.56 (0.58)	3.52 (0.57)	3.50 (0.64)	3.34 (0.65)	3.25 (0.75)
≥60	48 (20.00%)	3.27 (0.54)	3.28 (0.57)	3.48 (0.63)	3.14 (0.58)	3.22 (0.69)
ANOVA						
F (df*)		2.45 (3,236)	3.27 (3,236)	0.29 (3,236)	1.32 (3,236)	0.25 (3,236)
(*p*)		0.064	0.022	0.834	0.268	0.860
Social Status						
Single	59 (24.58%)	3.36 (0.47)	3.45 (0.44)	3.56 (0.45)	3.29 (0.58)	3.31 (0.71)
Married	149 (62.08%)	3.52 (0.47)	3.49 (0.44)	3.60 (0.43)	3.39 (0.53)	3.35 (0.66)
Divorced/widow	32 (13.33%)	3.06 (0.75)	3.01 (0.79)	3.12 (0.91)	2.90 (0.71)	2.90 (0.91)
ANOVA						
F (df*)		10.92 (2,237)	12.06 (2,237)	10.94 (2,237)	9.64 (2,237)	5.38 (2,237)
(*p*)		<0.001	<0.001	<0.001	<0.001	0.005
Education Level						
Primary	67 (27.92%)	3.36 (0.67)	3.27 (0.66)	3.35 (0.72)	3.12 (0.65)	3.11 (0.75)
Middle school	40 (16.67%)	3.50 (0.40)	3.47 (0.39)	3.71 (0.30)	3.51 (0.45)	3.31 (0.71)
Secondary	54 (22.50%)	3.45 (0.47)	3.52 (0.33)	3.54 (0.40)	3.38 (0.49)	3.35 (0.79)
Baccalaureate	79 (32.92%)	3.37 (0.51)	3.45 (0.55)	3.57 (0.52)	3.27 (0.63)	3.37 (0.63)
ANOVA						
F (df*)		1.41 (3,236)	2.85 (3,236)	4.36 (3,236)	4.13 (3,236)	1.74 (3,236)
(*p*)		0.240	0.038	0.006	0.007	0.159
Career						
Without	129 (53.75%)	3.43 (0.50)	3.43 (0.46)	3.52 (0.47)	3.28 (0.60)	3.26 (0.63)
Governmental	40 (16.67%)	3.23 (0.80)	3.30 (0.85)	3.35 (0.86)	3.21 (0.80)	3.13 (1.03)
Private	71 (29.58%)	3.51 (0.38)	3.46 (0.38)	3.64 (0.40)	3.36 (0.43)	3.41 (0.65)
ANOVA						
F (df*)		3.45 (2,237)	1.27 (2,237)	3.83 (2,237)	0.79 (2,237)	2.05 (2,237)
(*p*)		0.033	0.284	0.023	0.453	0.131
Relation to Patient						
Spouse	35 (14.58%)	3.59 (0.45)	3.51 (0.46)	3.35 (0.72)	3.12 (0.65)	3.11 (0.75)
Child	70 (29.17%)	3.46 (0.38)	3.43 (0.37)	3.54 (0.40)	3.38 (0.49)	3.31 (0.71)
Parent	42 (17.50%)	3.60 (0.32)	3.51 (0.37)	3.71 (0.30)	3.51 (0.45)	3.37 (0.63)
Sibling	37 (15.42%)	3.15 (0.81)	3.19 (0.85)	3.57 (0.52)	3.27 (0.63)	3.35 (0.79)
Other	56 (23.33%)	3.33 (0.53)	3.46 (0.45)	3.35 (0.72)	3.12 (0.65)	3.11 (0.75)
ANOVA						
F (df*)		5.32 (4,235)	2.61 (4,235)	5.24 (4,235)	3.96 (4,235)	2.82 (4,235)
(*p*)		<0.001	0.037	<0.001	0.004	0.026
ICU duration						
0-3 days	120 (50.00%)	3.38 (0.56)	3.38 (0.57)	3.48 (0.60)	3.22 (0.63)	3.17 (0.70)
4-7 days	71 (29.58%)	3.46 (0.50)	3.47 (0.46)	3.01 (0.43)	3.44 (0.53)	3.33 (0.78)
>7 days	49 (20.42%)	3.44 (0.54)	3.45 (0.48)	3.52 (0.54)	3.62 (0.54)	3.50 (0.62)
ANOVA						
F (df*)		0.47 (2,237)	0.81 (2,237)	1.18 (2,237)	3.39 (2,237)	3.92 (2,237)
(*p*)		0.628	0.447	0.308	0.035	0.021

n: frequency; %: percentage; *df: degrees of freedom; ANOVA: analysis of variance

"very important" to the respondents, but only 33% of the needs assessed were always met. The seven need items with the highest percentage indicating that the need is "very important" are shown in Table 2. Some very important needs were not always met. For example, Item 1, "To be called at home about changes in the patient's condition" received the highest mean importance score (3.65 out of a total possible score of 4) with 72.92% of the participants identifying it as "very important." However, only about half (49.17%) of the respondents rated this need as "always met." The need that was most regularly met among the needs deemed most important was "To be called at home about changes in the patient's condition." The needs most likely to be met are displayed in Table 3. All needs that received the highest frequencies of being met were items that derive from the proximity domain of the instrument. Conversely, Table 3 also shows the needs met least often, and most of these items arise from the support domain of the instrument. Item 3, "To have a telephone in the waiting room" received the highest percentage (37.08%) of participants indicating that this need was unmet, followed by: "To be told about other people who could help with problems" (19.58%); "To talk about the possibility of the patient's death" (18.33%); "To talk about feelings"

(17.92%); and, "To have visiting hours or restrictions changed for special conditions" (17.92%). When comparing the most important needs with their likelihood of being met, data suggested that a number of very important needs were infrequently met.

The results for the five domains (information, proximity, assurance, support, and comfort) are shown in Figure 1. The assurance domain ranked highest in terms of importance,
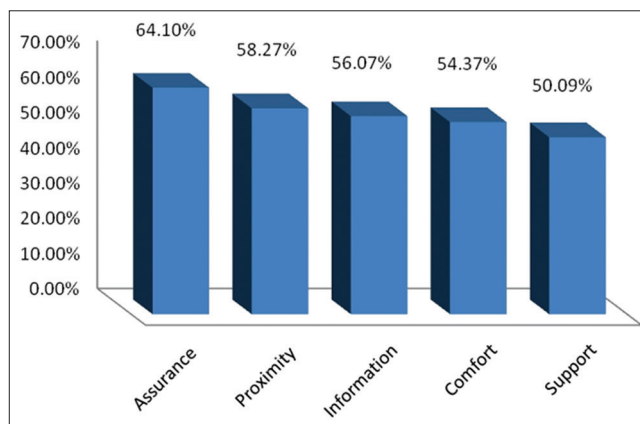

Figure 1: Level of importance of needs by domain

Table 2: Family Needs Importance and Likelihood of Being Met

Need Item	Dimension	Importance of need		Extent to which need is met	
		Mean (SD)	"Very important" *N* (%)	Mean (SD)	"Always met" *N* (%)
To be called at home about changes in the patient's condition	Proximity	3.65 (0.67)	175 (72.92)	3.20 (0.67)	118 (49.17)
To be assured that the best possible care was being given to the patient	Assurance	3.65 (0.74)	167 (69.58)	3.30 (0.85)	98 (40.83)
To feel there was hope	Assurance	3.59 (0.71)	165 (68.75)	2.90 (0.92)	80 (33.33)
To have questions answered honesty	Assurance	3.56 (0.73)	161 (67.08)	2.98 (0.93)	84 (35.00)
To talk to the doctor every day	Information	3.53 (0.77)	158 (65.83)	2.90 (0.98)	88 (36.66)
To feel that hospital personnel cared about the patient	Assurance	3.51 (0.77)	155 (64.58)	3.00 (0.89)	86 (35.83)
To have a specific person to call at the hospital when not there	Information	3.50 (0.75)	154 (64.17)	2.90 (1.0)	83 (34.58)

n: frequency; %: percentage

Table 3: Level of Needs Being Met

Items	Always met *N* (%)	Dimensions
"To be called at home about changes in the patient's condition"	118 (49.17)	Proximity
"To be told about transfer plans"	110 (45.83)	Proximity
"To receive information about the patient once a day"	105 (43.75)	Proximity
"To have visiting hours start on time"	102 (42.50)	Proximity
"To talk with the nurse each day"	102 (42.50)	Proximity
Items	**Need Unmet *N* (%)**	**Dimensions**
"To have a telephone in the waiting room"	89 (37.08)	Comfort
"To be told about other people who could help with problems"	47 (19.58)	Support
"To talk about the possibility of the patients' death"	44 (18.33)	Support
"To talk about feelings"	43 (17.92)	Support
"To have visiting hours or restrictions changed for special conditions"	43 (17.92)	Proximity

n: Frequency; %: Percentage

with the average percentage of participants indicating "very important" at 64.10%. Under this category, the item with the largest proportion of participants responding "very important" was: "To be assured that the best possible care was being given to the patient" (64.10%). The average percentages of participants choosing "very important" for the needs under the other domains were the following: proximity (58.27%), information (56.07%), comfort (54.37%), and support (50.89%). Relationships between sociodemographic characteristics and the needs of families according to CCFNI dimensions were also analyzed [Table 1]. No statistically significant differences were found between gender and needs. Older respondents (aged 46–59) seem to place more importance on proximity-related needs than younger respondents ($F_{3,236}$ = 3.27, p = 0.022), and respondents who are the parent of the patient reported higher levels of importance of information, assurance, proximity, support, and comfort needs than other types of relatives at a significant level ($F_{2,237}$ = 5.32, p < 0.001, $F_{2,237}$ = 5.24, p < 0.001, $F_{2,237}$ = 2.61, p = 0.037, $F_{2,237}$ = 3.96, p = 0.004, $F_{2,237}$ = 2.82, p = 0.026, respectively). In addition, there were significant differences in the level of importance in the dimensions related to assurance ($F_{3,236}$ = 2.85, p = 0.038), proximity ($F_{3,236}$ = 4.36, p = 0.006), and support ($F_{3,236}$ = 4.13, p = 0.007) and the educational level of the participants. Also, significant differences were found in the level of importance assigned to all of the dimensions and the social status of the participants; married participants have a higher need for these dimensions. Furthermore, there were statistically significant differences in the level of importance allocated to information ($F_{2,237}$ = 3.45, p = 0.033) and assurance ($F_{2,237}$ = 3.83, p = 0.023) dimensions and the career of the participants; participants working in the private sector tended to have a higher need for these dimensions. Last, there were statistically significant differences in the importance level allocated for support ($F_{2,237}$ = 3.39, p = 0.035) and comfort ($F_{2,237}$ = 3.92, p = 0.021) dimensions and the patient ICU stay duration; family members of patients who stayed more than 7 days tended to have a higher need for these dimensions.

Discussion

The current study explored the needs of ICU patients' family members in Palestine. Results of this study were supported by other studies using the CCFNI across cultures.[4,9,11,15] Similar to other findings, in our study, family members classified the assurance domain as the most important one. The findings of this study were consistent with another study carried by Obringer *et al.* (2012), entitled: "Meeting the needs of relatives of critically ill patients," which used the CCFNI to evaluate the needs of 50 relatives of patients in the United States.[4] The assurance domain was reported to be the highest needed domain for families in this study. Despite differences in family roles and responsibilities across cultures, it appears that it is universal for family

members of ICU patients to need assurance about the state of their loved one's condition. Within the Arab world, a study conducted in 2018 in Saudi Arabia by Alsharari had similar findings to the current study:[11] assurance was the most important domain for family member needs. However, contrary to the current study, the next most important domain was information for the Alsharari study, while proximity was the next most important domain in the current study. The movement restrictions placed on Palestinians by the occupation policies and practices may account for the fact that proximity and being continually in contact by telephone with the ICU staff was more important in our study than that of another geopolitical context. Consistent with prior findings from the U.S., Saudi Arabia, Malaysia, and Chile,[4,10,15,16] this study found that support was considered the least-important domain.

Regarding the relationship between sociodemographic variables and family needs, females presented a higher needs mean score compared to males; however, the differences were not statistically significant and this may be due to the fact that the proportion of females was lower than males in our study. The previous studies have found that females consider family needs as a priority[11,16] and that ICU members should take this issue into consideration to find a strategy to satisfy women's needs.[16] In our study, the respondents who are the parent of the patient reported higher levels of importance, particularly in terms of assurance, proximity, and support needs, than other types of relatives. This similarity was reported by other researchers.[11,16] Parents, during ICU experience, are vulnerable and their defence mechanisms increase rapidly; even if they are informed and acknowledged the risk, they still need assurance, support, and comfort. It is also significant to note that an ICU experience is unique for parents who become more acquainted with the environment. In some experiences, people who make friendships while waiting for their patient learn from others about services provided by the unit during their stay.[17] In addition, there were significant differences in the level of importance in the dimensions related to assurance, proximity, and support and participants with higher levels of education compared to those with lower educational levels. However, there were no statistically significant differences in information and comfort domains. This was consistent with other studies[16] and inconsistent with the study conducted by Alsharari.[11] Also, significant differences were found in the level of importance assigned to all of the dimensions and the social status of the participants; married participants had a higher need for these dimensions. There were statistically significant differences in the importance level allocated for support and comfort dimensions and the patient ICU stay duration; family members of patients who stayed more than 7 days tended to have a higher need for these dimensions. Time is crucial for those who have family members in the ICU, and research studies support the fact that the

range of needs enlarges and family members start to need more support, especially on the psychological and spiritual level.[17]

The type of sampling utilized for this study (convenience sampling) necessarily created some limitation to the findings compared to a randomized sampling method. In addition, the fact that the patients' families were responsible for choosing which member would fill out the questionnaire also posed some limitations in terms of randomization and representativeness. The severity of the disease or condition from which the patient was suffering and the level of consciousness are factors that were not included in the current study, and may have added more dimensions to the understanding of family members' needs. Exploring family needs from a qualitative perspective might help to deepen understanding of met and unmet needs and their relative importance to this population, which warrants further studies.

Conclusion

The current study, considered to be the first study in Palestine aimed at assessing family needs of ICU patients, has provided important data about what the most important needs are and how likely those needs are to be met. These findings need to be translated into changes in ICU nursing and healthcare practices. Overall, participants in this study perceived that their needs were inadequately met. Assurance- and proximity-related needs of family members need to be prioritized, and parents and family members of longer-stay ICU patients should be considered groups in need of extra support in addressing their needs. In addition, it was revealed that the needs of family members are influenced by sociodemographic variables. The research shows the need to innovatively look at the needs of different types of family members of ICU patients and cluster them in a way that they can become significant for any future intervention to improve the services offered in any ICU unit. Accordingly, nurses can identify needs that are both important and largely unmet, and push toward implementation of best practices to increase the level of patient and family satisfaction with care in the ICU.

Acknowledgements

Conflicts of interest

Nothing to declare.

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