

A comparative study of the perceptions of family members patients hospitalized in intensive and cardiac care units (CCU and ICU) in regard to the importance of family needs in Golestan University of Medical Sciences 2020

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ABSTRACT

Introduction: Intensive care units (ICUs) cause double stress and tension in hospitalized patients' family members. Improving care quality in these wards requires estimating the importance of the families' needs by the nurses. Therefore, the present research was designed to determine and compare the perceptions of family members of the patients hospitalized in the ICUs and cardiac care units (CCUs) about the importance of family needs and their relationship with some factors in the Golestan University of Medical Sciences, 2020. **Methods:** This was a descriptive-analytical study. Eighty-eight companions of the patients admitted in the ICU and 88 companions of the patients admitted in the CCU were studied by stratified sampling, proportional, and then, available allocation. To analyze the data, Mann-Whitney, Kruskal-Wallis, and multivariate analysis of variance in the SPSS 18 statistical software were used (the significance level was 0.05). **Results:** The results revealed that in both the ICUs, the variable "the family relationship of hospitalized patients' companions" and their needs was found to be significantly different in general. This difference in all dimensions was related to the relationship between the spouse and the patient. Generally, there was no significant difference between the gender of the patient's companion and the importance of family needs in the CCU ward, but this difference was significant in general and in all dimensions in the ICU ward so that the importance of all the needs was more in the female companions. **Conclusion:** This study proved that the need in the "confidence" dimension is the most important need of the family of patients admitted to the two wards (CCU) and (ICU).

Keywords: Family needs, intensive care unit, patients' families

Introduction

Contracting deadly diseases and following hospitalization in an intensive care unit in a hospital often occur unexpectedly and

without any warning so the patients and their families have no time to be prepared.^[1] During this period, family members are not prepared to encounter the issue of admitting a family member to the intensive care unit, so they may experience a change of role and feel fear and insecurity.^[2] Reactions of shock, anger, frustration, anxiety, and depression in family members can be triggered by fear of death, doubts about prognosis and treatment, emotional conflicts, worries about economic conditions, change

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of roles, and disruption of daily affairs, especially in the first 72 h of hospitalization.^[2] Research in this field revealed that a major part of the family members' stress is caused by the lack of information about the prognosis and treatment, as well as unfamiliarity with the environment and complex equipment in intensive care units (ICUs).^[3] Another study proved that 50% of the families are not able to understand the explanations of the physicians concerning the prognosis and diagnosis and treatment due to anxiety conditions.^[4] Another issue that adds to the burden of the pressure imposed on the family members and their emotional needs is that about three-quarters of the patients admitted to the ICUs are unable to participate in their treatment decisions, so the physicians and nurses must rely on their family members to make the treatment decisions.^[2] When it is necessary for the family members to make an appropriate and timely decision about the patients with special conditions, this issue is especially more important.^[5] Therefore, the first step to reduce anxiety and stress in the families is an accurate and scientific assessment regarding the perception of the family of the patients admitted to the ICUs, and if families' expectations are not met, it can cause distress and anxiety in these families.^[6] Meneguín *et al.*^[7] in Brazil confirmed that the support dimension is the highest need and the comfort dimension is the lowest need of the families with patients admitted to the ICU. Patients in critical condition and under constant monitoring are admitted to the ICUs due to the unstable and different conditions of patients in these wards, compared to the general wards. It is expected that the needs of the families in these wards are different from those of the families in the other wards.^[8] Therefore, it is important and necessary to identify the needs of families with patients admitted to the ICUs. On the other hand, it is an undeniable priority for the nurses working in the ICU and cardiac care unit (CCU) to recognize and address the psychosocial needs of the family members with special patients.^[1] Due to the lack of access to related studies in the Golestan Province and the necessity to identify the needs of these families, the present study sought to compare the perceptions of the family members of the patients admitted to the ICU and CCU wards concerning the importance of family needs and their relationship with some factors in the educational and medical centers of the Golestan University of Medical Sciences in 2020.

Method

Sampling and study design

This is a descriptive-analytical study. The study population included companions of patients admitted to the ICUs of CCU and ICU. Eighty-eight companions of the patients were determined for each ward according to the studies of Zainah *et al.*^[9] and Alsharari *et al.*,^[10] the formula of the sample size, power of 80%, and a significant level of 0.95. First, the whole province was divided into three groups: East, Central, and West. Two hospitals were randomly selected from each group. Then, according to the selected hospitals and the number of beds available in their ICUs, based on the appropriate allocation for the ward (CCU), 20 companions from the selected hospitals in the

eastern part of the province, 20 companions from the selected hospitals in the western part of the province, and 48 companions were chosen from the selected hospitals of the central region of the province by availability. For (ICU): 23 patients from the selected hospitals in the eastern part of the province, 28 patients from selected hospitals in the western part of the province, and 37 patients were chosen from the selected hospitals in the central region of the province by availability.

Data collection

After obtaining a license from the Ethics Committee and providing initial coordination by referring to the ICU and CCU wards personally, the patients who had been in the ward for 24 h were chosen from the list of patients admitted to the ward. After examining the file and asking the patient who his/her main companion is and who mostly visited him/her during the hospitalization, the patient's companion was chosen based on the inclusion criteria and through telephoning the companion to complete the questionnaire, the initial coordination was provided. For each patient, one companion was selected. Furthermore, for patients with a low level of consciousness based on their file information, the patients' companions were selected according to the inclusion criteria. If the hospitalized patient had several companions with inclusion criteria, the selection priority was based on randomness; however, such a case did not occur in the research process. After obtaining permission from the companions and providing them with the necessary explanations, they completed the questionnaires during patient visits. To collect data, a questionnaire on assessing the needs of the families with patients admitted to the ICU was used. This questionnaire consists of 45 four-choice items and five dimensions including support needs, comfort, information, closeness, and confidence. It is scored based on the Likert scale: 1 (not important), 2 (slightly important), 3 (important), and 4 (very important). The support dimension includes 15 items. The score range of this dimension varies between 15 and 60. The comfort dimension consists of three items with a score range between 6 and 24. The information dimension has three items whose scores vary between 8 and 32. The closeness dimension consists of four items with a score range between 9 and 36. The confidence dimension includes four items whose score range varies between 7 and 28.^[11] The whole scores of this questionnaire vary from 45 to 180.^[11] The validity and confidence of this questionnaire were conducted in 2012 by Bandari *et al.*^[11] in Iran. Cronbach's alpha coefficient of the whole questionnaire was 0.92, more than 0.7 in three dimensions of support, comfort, and closeness, and between 0.6 and 0.7 in two dimensions of confidence and information.

Statistical analysis

Data were entered into the SPSS software version 18. The Shapiro–Wilk test revealed that the examined variables lacked a normal distribution. Therefore, the Mann–Whitney, Kruskal–Wallis and multivariate analysis tests were used for analysis. The significant level was assumed to be 0.05.

Code of ethics

This study is related to the dissertation of the Golestan University of Medical Sciences with an ethical code: IR.GOUMS.REC.1398.339.

Findings

The mean and deviation of the companions' age was 36.57 ± 7.86 years. The mean age of the patients was 14.46 ± 60.63 years.

Most of the companions were women ($n = 107$) 60.8%, 30.6% ($n = 52$) of the patients were accompanied by their girls, 27.6% by their boys and 18.2% ($n = 31$) by their spouses. Most of the companions had a diploma (31.8%) and only 1.1% of the patients' companions had a doctorate. In regard to the economic status, 53.5% (93 people) were in the moderate status and 40.2% were in a good status. Regarding employment, most of the companions (38.3%) were unemployed and 29.1% of them were self-employed.

The multivariate analysis of "comparing the perceptions of the family members of the patients admitted to the CCU and ICU in terms of support, comfort, information, closeness and confidence," proved that there was no statistically significant difference between the two ICUs. ($F_{(5,170)} = 1.53, p = 0.17, Wilks \Lambda = 0.956$) In the scaled scores, the highest mean score was related to "confidence" (3.31 ± 0.52) and the lowest mean score was related to the "support" dimension (2.99 ± 0.59). Among the family needs of patients admitted to the CCU and ICU wards, the dimensions of "confidence," "closeness," "comfort," "information" and "support" are the most important, respectively, in the family members' view.

Regarding the gender of the companions, there was no statistically significant difference in the perception of the family members of the patients admitted in the (ICU) ward ($F_{(5,89)} = .91, p = .47, Wilks \Lambda = 0.956$). However, comparing each of the perceptual dimensions of the family needs separately based on the gender of the patient's companions revealed that only in the closeness dimension, the perception of the patient's companions had a statistically significant difference between the two genders ($P = 0.04$). The average score of female companions was higher than that of male companions.

Multivariate analysis was performed for comparing the perceptions of the family members of the hospitalized patients in the CCU in general and in all dimensions of support, comfort, information, closeness, and confidence simultaneously, and a statistically significant difference was observed ($F_{(5,82)} = .806, p < 0.001, Wilks \Lambda = 0.812$). In all perceptual dimensions of family needs, the average score of the female companions was higher than that of the male companions [Table 1].

Table 1: Specifying and comparing the perceptions of family members of patients admitted to ICU and CCU wards and the importance of family needs in terms of demographic variable of companions' gender in educational and medical centers of the Golestan University

Variable	Ward	Gender of companion	n	Mean	SD	P
Support	ICU	Male	33	94.43	18.9	0.07
		Female	55	29.47	95.7	
	CCU	Male	36	94.39	48.8	0.001<
		Female	52	19.46	36.8	
Comfort	ICU	Male	33	30.18	52.3	0.14
		Female	55	42.19	36.3	
	CCU	Male	36	39.17	95.2	0.01
		Female	52	15.19	51.3	
Information	ICU	Male	33	91.23	10.4	0.06
		Female	55	58.25	4.04	
	CCU	Male	36	94.22	4.16	0.01
		Female	52	29.25	33.4	
Closeness	ICU	Male	33	55.27	45.4	0.04
		Female	55	36.29	75.3	
	CCU	Male	36	58.25	35.4	>0.001
		Female	52	88.28	86.3	
Confidence	ICU	Male	33	85.22	61.3	0.11
		Female	55	24.07	41.3	
	CCU	Male	36	33.21	33.21	>0.001
		Female	52	69.23	69.23	

In general, there was no statistically significant difference in the perceptions of the family members of the hospitalized patients based on the occupation of the patients admitted to the ICU. However, in comparing each of the perceptual dimensions of the needs of the hospitalized patients, there was a statistically significant difference between the four occupational groups of the companions only in terms of the "support" dimension ($P = 0.01$). Therefore, the mean score of need in the dimension of support was higher only in the companions of the working patient than in other jobs. In addition, there was no statistically significant difference in the perception of the family members of the hospitalized patients based on the occupation of the patients admitted to the CCU ward. However, in univariate analyzes, there was a statistically significant difference in the dimensions of support ($P < 0.001$), information ($P = 0.04$), and confidence ($P = 0.04$) of the companions with different occupations. The importance of need in these dimensions has been higher among the unemployed companions than in other jobs [Table 2].

There was not a statistically significant difference in comparing the perceptions of family members of hospitalized patients based on the family relationship of the companions to the hospitalized patients in the ICU and CCU in general and in all dimensions in terms of support, comfort, information, confidence, and closeness (multivariate analysis). Therefore, the total mean score of the companions' relationship related to the spouses of the patients admitted in both wards was ($P < 0.05$) in all dimensions.

Table 2: Specifying and comparing the perceptions of family members of patients admitted to ICU and CCU wards and the importance of family needs in terms of demographic variable of companions' jobs in educational and medical centers of the Golestan University

Variable family needs		Job of patients' companion	n	Mean	SD	P
Support	ICU	Self-employment	26	81.41	9.01	0.01
		employee	19	21.48	35.8	
		Worker	10	80.50	33.7	
	CCU	unemployed	33	67.46	47.7	
		Self-employment	25	00.40	26.8	
		employee	20	00.42	15.8	
Comfort	ICU	Worker	8	63.41	90.7	0.08
		Unemployed	34	74.47	87.8	
		Self-employment	26	65.17	45.3	
		Employee	19	37.19	91.3	
		Worker	10	50.20	41.2	
		Unemployed	33	39.19	21.3	
	CCU	Self-employment	25	00.17	24.3	
		Employee	20	55.18	58.2	
		Worker	8	25.18	65.2	
		Unemployed	34	41.19	83.3	
		Self-employment	26	42.23	90.3	
		Employee	19	74.25	58.4	
Information	ICU	Worker	10	50.26	34.4	0.11
		Unemployed	33	24.25	4.04	
		Self-employment	25	23.04	72.3	
		Employee	20	25.24	68.3	
		Worker	8	25.22	44.5	
		Unemployed	34	76.25	71.4	
	CCU	Self-employment	26	35.27	45.4	
		Employee	19	29.05	4.44	
		Worker	10	30.10	38.3	
		Unemployed	33	29.09	69.3	
		Self-employment	25	88.25	23.4	
		Employee	20	28.05	14.4	
Closeness	ICU	Worker	8	63.25	50.4	0.04
		Unemployed	34	28.76	4.20	
		Self-employment	26	23.08	65.3	
		Employee	19	74.23	87.3	
		Worker	10	00.24	23.3	
		Unemployed	33	85.23	40.3	
	CCU	Self-employment	25	40.21	34.3	
		Employee	20	35.23	96.2	
		Worker	8	38.21	20.4	
		Unemployed	34	50.23	98.3	
		Self-employment	26	23.08	65.3	
		Employee	19	74.23	87.3	
Confidence	ICU	Worker	10	00.24	23.3	0.83
		Unemployed	33	85.23	40.3	
		Self-employment	25	40.21	34.3	
		Employee	20	35.23	96.2	
		Worker	8	38.21	20.4	
		Unemployed	34	50.23	98.3	
	CCU	Self-employment	26	23.08	65.3	
		Employee	19	74.23	87.3	
		Worker	10	00.24	23.3	
		Unemployed	33	85.23	40.3	
		Self-employment	25	40.21	34.3	
		Employee	20	35.23	96.2	

A statistically significant difference was not observed in comparing the perception of the family members of the hospitalized patients and its dimensions based on age, level of education, and economic status of ICU and CCU companions in general and in all dimensions of support, comfort, information, confidence, and security together (multivariate analysis) ($P > 0.05$).

Discussion

The findings of the present study showed that the highest need perceived by the family members with patients admitted to wards (ICU, CCU) was in the dimension of confidence and the lowest perceived need was related to the dimension of support

that was in line with^[12] Hamukwaya (2019),^[13] Salameh (2020),^[14] Dharmalingam *et al.* (2016)^[15] and Khoshnodi *et al.* (2017).^[16] Contrary to the findings of the present study, Yildirim *et al.* (2018)^[17] showed that for family members with a patient admitted to the ICU, the need for confidence is the most important need and is more important than the other needs. Contrary to the present findings, Meneguín *et al.* (2018)^[7] in Brazil and Hasandoost *et al.* (2018)^[18] stated that the greatest need was for the support dimension. The probable reason for this difference is due to the cultural differences and the research community of the companions. It seems that in the early days of patient admission to the ICU, where families are more exposed to emotional stress, it is more important to pay attention to the confidence of the care provided.

The results showed that there is no significant relationship between the perception of the family members of the patients admitted to the ICU and CCU regarding the importance of family needs both simultaneously and separately, and the only score obtained related to the importance of family members with hospitalized patients in the (ICU) ward was higher in the dimensions of “support” and “closeness,” which contradicted the study of Sarhadi *et al.* (2014)^[19] in Zahedan. The possible reason for this difference in addition to the individual differences in the research community can be related to the questionnaire used. In the study of Sarhadi *et al.*,^[19] the “Multer Family Psycho-Social Needs” questionnaire was used, and in the present study, the validated questionnaire of the family perception of the importance of the family needs of the patients admitted to the ICU was used. In addition, the study was conducted in Zahedan and the needs of the patients’ families may be different from the Golestan Province due to individual, social and cultural differences. It also contradicts the study of Zainah *et al.* (2016)^[9] in Malaysia. The differences in individual characteristics, sociocultural context, management processes, physical structures, and care facilities of the hospitals in that country with the study population of the present study can be the possible reasons for the difference in the findings.

Furthermore, in separate analyzes of the demographic information of the patients’ companions based on companion gender in the ward (ICU), there was no significant difference in general, and only in the “confidence” dimension, the importance of need was significantly different, so that the need importance score in the “confidence” dimension has been more in women than men. These results are in line with the results of the Nolen *et al.* (2014)^[20] study in the United States and Kobi *et al.*^[21] The present study contradicts the study of Gundo *et al.* (2014)^[22] in Malawi. In Gundo’s study, there was a significant difference between the scores obtained between women and men, and men scored higher in the “comfort” dimension. Also, in contradiction with the present findings, Daramalingham *et al.* (2016)^[15] showed that there was no significant difference between genders.

In separate analyzes of the demographic information of the patients’ companions based on the companion gender in the ward (CCU) in general and in all dimensions of the importance of need, there was a significant difference, so that the score of the importance of need in general and in all dimensions was higher in women than men. It was in line with the results of the study by Zainah *et al.* (2016).^[9] However, these findings were in contradiction with the results of Daramalyngam *et al.* (2016).^[15] The differences in the intensive care unit and patient diversity can affect the perceived needs of the family members.

In the present study, in separate analyzes of demographic information of patients’ companions based on the companion’s relationship with the hospitalized patient in the ICU and CCU wards in general and in all dimensions of the importance of the need, there was a significant difference. The highest score of the

importance of the needs of family members is related to the patient’s spouse relationship, which was in line with the results of the study by Hamokawaya (2019).^[13] However, it was inconsistent with the results of the study by Iranmanesh *et al.* (2014)^[23] in Kerman. They stated that the proportion of family members is only significantly related to the importance of the need in the information dimension.

In separate analyzes of the demographic information of the patients’ companions based on the level of education of the companions with the patients hospitalized in the ICU and CCU wards, there was no significant difference with the importance of their needs in general and in all dimensions. This finding is in line with the results of studies by Liew *et al.* (2018)^[24] in Malaysia, Divdar *et al.* (2019),^[25] and Shahrokhi *et al.*^[26] while it contradicts the study of Loghmani *et al.* (2014)^[27] in Kerman in which the need for information is higher in people with higher education. It also contradicted the results of Hasandoost *et al.* (2018).^[18] In the study by Hasandoost, it was shown that the score of the dimensions of the need of people with a lower level of education is lower.

In separate analyzes of demographic information of companions of patients, there was no significant difference in general based on the occupation in both wards (ICU) and (CCU) with the average score of the importance of their needs. Only in the ward (CCU), there was a significant difference between the mean score of the needs of the companions of the hospitalized patients in terms of information, support, and confidence in their occupation so that the importance of the need of the companions who were unemployed was more significant in these dimensions. These findings were consistent with the study of Iranmanesh *et al.* (2014)^[23] and Hasandoost *et al.*^[18]

In separate analyzes of the demographic information of the patients’ companions, there was no significant difference based on the economic status of the companions with hospitalized patients in both wards (ICU) and (CCU) with the average score of the importance of their needs in general and in all dimensions. This finding is in line with the results of the study of De Beer *et al.* (2016).^[28] Contrary to the findings of the present study, Hasandoost *et al.*^[18] showed that the importance of the needs of family members with patients admitted to the ward (ICU) in terms of comfort had a statistically significant relationship with their income status. The differences in the research community can be one of the possible causes of these differences in findings. Contrary to the findings of the present study, Zainah *et al.* (2016)^[9] in Malaysia, in separate analyzes between income and the needs of family members with patients in cardiac intensive care, showed that the monthly income of family members has a significant relationship with their needs only in terms of comfort and support dimensions. The probable reason for this difference is individual differences and differences in the socioeconomic context of the research community and differences in the organizational and managerial structure of the hospitals under study.

In the present study, in separate analyzes of demographic information of patients' companions, there was no significant difference based on the age of the patients' companions with hospitalized patients in ICU and CCU wards, with the mean score of the importance of their needs in general and in all dimensions. This finding is in line with the results of the studies by De Beer *et al.* (2016),^[28] Farasat Kish *et al.* (1396),^[6] Hasandoost *et al.*^[18] and Shahrokhi *et al.*^[26] However, it contradicted the findings of a study by Dharmalingam *et al.* (2016).^[15] The probable reason for this difference can be attributed to individual differences in the research community, physical and managerial structure, and the diversity and nature of the hospitalized patients.

Conclusion

The family needs of ICU patients, in order of importance, included confidence, information, closeness, support, and comfort. Therefore, nurses should pay attention to the fact that the patient and his family are one unit, and to provide care, the patient's family should not be neglected. And by taking into account the needs of the patients' families in the ICU and taking a family-centered approach, meet the major needs of the patients. In this way, they can make a significant contribution to improve quality of the patient and family care and their satisfaction.

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Conflicts of interest

There are no conflicts of interest.

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