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ORIGINAL RESEARCH / *ÖZGÜN ARAŞTIRMA*

Family needs, psychological distress and social support in the intensive care unit: a cross-sectional study

Yoğun bakım ünitesinde yatan hasta ailelerinin gereksinimleri, psikolojik sıkıntıları ve sosyal destek düzeylerinin incelenmesi

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ABSTRACT

Objectives: The aim of the study was to determine the relationships between sociodemographic factors related to the needs of individuals and family needs, psychological distress and social support.

Methods: A Personal Information Form, Critical Care Family Needs Inventory (CCFNI), Kessler Psychological Distress Scale (K10-PDS), and Multidimensional Scale of Perceived Social Support (MSPSS) were used to collect data.

Results: The domains in which the participants were determined to have the greatest degree of need were information (38.45±5.23) and support (32.04±7.05). Participants with low education level and who visited their patients more frequently than once a week had significantly higher scores on the information, assurance, proximity, and comfort subscales. The participants had high K10-PDS (25.77±9.99) and MSPSS (68.62±15.54) scores. There was a significant positive relationship between the CCFNI and MSPSS scores of the participants (r=0.400).

Conclusions: The family members of intensive care patients were determined to have a high degree of need and high levels of psychological distress. It is extremely important for health professionals to support the family and include them in the care process. Increasing the quality of care for the patient and providing psychological relief to the family will increase the quality of care.

Keywords: critical care, intensive care, family needs, psychological distress, social support

ÖZ

Giriş ve Amaç: Bu çalışmanın amacı yoğun bakımda hastası olan aile üyelerinin gereksinimlerini, psikolojik sıkıntı ve sosyal destek düzeylerini ve aile gereksinimleri ile ilişkili faktörleri araştırmaktır.

Yöntem ve Gereçler: Tanımlayıcı ve kesitsel tipteki bu çalışma, Şubat-Ağustos 2023 tarihlerinde bir hastanenin yoğun bakım servisine ziyarete gelen aile üyeleri ile gerçekleştirildi. Araştırmaya 166 kişi alındı. Araştırmada anket formu, Yoğun Bakım Ünitesindeki Hastaların Yakınları için Gereksinim Ölçeği, Kessler Psikolojik Sıkıntı Ölçeği ve Çok Boyutlu Algılanan Sosya Destek Ölçeği kullanıldı.

Bulgular: Araştırmada aile üyelerinin en çok gereksinim duyduğu alanlar bilgi (38.45±5.23) ve destek altboyutu (32.04±7.05) olmuştur. Eğitim düzeyi düşük olanlarda eğitim düzeyi yüksek olanlara kıyasla; hastasını haftada bir kereden fazla ziyaret edenlerde haftada bir kereden daha az sıklıkta ziyaret edenlere göre bilgi, güvenlik/yakınlık, destek konfor puanı eğitim düzeyi yüksek olanlara kıyasla daha yüksek düzeyde bulunmuştur ($p < 0.001$). Aile üyelerinin psikolojik sıkıntı puanı (25.77±9.99) ve sosyal destek puanı (68.62±15.54) yüksek düzeyde saptanmıştır. CCFNI ile MSPSS arasında pozitif yönde bir ilişki olduğu ($r = 0.40$, $p < 0.001$) belirlenmiştir.

Tartışma ve Sonuç: Araştırmada ailelerin gereksinimleri ve psikolojik distresss düzeyleri yüksek düzeyde saptanmıştır. Ailelere düzenli olarak eğitimler verilmesi gerektiği ve ruhsal yönden sıkıntı düzeyi yüksek olanların uzman desteğine yönlendirilmesi gerektiği düşünülmektedir. Türkiye'de yoğun bakım ünitesinde yatan hastaların aile üyelerine yönelik kapsamlı bakım programları geliştirilmelidir.

Anahtar kelimeler: yoğun bakım, aile ihtiyaçları, psikolojik sıkıntı, sosyal destek

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Introduction

The family members of intensive care patients are exposed to several stressors that may lead them to feel defenseless. Family members find the physical environment of intensive care units and the intensive care provided unfamiliar, and they may experience worry and fear due to the life-threatening condition of their relatives, unfamiliar technologies at these units, and multiple strangers circulating in the unit (1-3). This may be distressing and exhausting for family members, and symptoms of anxiety, depression, and post-traumatic stress symptoms may persist for three months or longer (1,4,5). In a study, it was observed that family members had moderate to high levels of psychological distress symptoms that negatively affected them and the patient (2). These psychological symptoms can impact caregivers' ability to interact with the clinical team, their long-term psychological health, and their ability to help the patient manage their condition after discharge from hospital (6). When clinicians recognize this, long-term negative outcomes such as complicated grief and major depression in family members can be prevented (7). Supporting the family is essential in order to alleviate the distress experienced by the family (8,9). Studies emphasize that families of patients in intensive care should be included in the care (10,11).

Understanding the needs of the family members of patients at the hospital, especially those in intensive care units (ICUs), is the key to providing comprehensive and effective support for this group of individuals (12). Meeting the needs of families of patients in intensive care, reducing distress, reducing tension between family and staff, and giving staff greater attention to patients' needs will lead to better outcomes (13,14). High-quality intensive care unit service should also consider the needs of family members (15,16). The family members of ICU patients have various needs, such as information, flexible ICU visiting hours, hope, and assurance (17-19). Studies over the past five years have confirmed that when family members' needs are met, their decision-making capacity increases and symptoms of post-traumatic stress disorder decrease (10,20). Family-centered care reduces psychological disorders in family members, increases patient satisfaction, and improves communication between the family member and healthcare personnel (17,21). Patient and family-centered care (PFCC) emphasizes the importance of the family as a major source of support and considers the involvement of family members in all aspects of the patient's health care (22). Dignity and respect, information sharing, patient and family participation, and collaboration in care (11,23) are key elements in this care. Both patients and family members can benefit psychologically from this care (24,25). At this point, health professionals need to systematically support the patient's family and see them as a central collaboration partner, and only in this way can the expectations of both the patient and the family be met (24,26). Nurses who have close contact with families are in an ideal position to better understand and prevent psychological distress among family members whose loved ones are treated in intensive care (2,27,28). During visiting hours, family members should be allowed to participate in patient care under the supervision and support of nurses (3). Nurses can identify stressors and early signs that negatively affect family members and provide support to them (2). Furthermore, it is recommended that nurses plan interventions to reduce family members' anxiety (29).

Social support was listed among the coping strategies used by the family members of patients hospitalized in ICUs because of critical conditions (30). Social support has been defined as an important buffer and resource for families under stress (31). Perceived social support may be categorized as informational (providing appropriate information to help the individual), emotional (positive expressions of attention and listening), or instrumental (material help or help in daily responsibilities) support (32). Social support helps individuals cope with problems, increases their satisfaction, and raises their quality of life (29). Investigating the sources of social support

for family members (29), as well as their needs, may improve the quality of patient care in ICUs.

In the literature that following a relative's admission to the intensive care unit, the needs of family members should be determined and collaborative relationships between healthcare providers and families should be facilitated (33,34). This research is important in terms of determining the current situation and planning the necessary interventions. Defining the situation and determining the needs of families can be effective in the support and care interventions that can be provided to families. In addition, determining the psychological distress levels of families will guide the psychosocial interventions that can be applied. Here, it is important to learn and emphasize the functionality of the social support mechanism, which is a protective factor for families. In Türkiye, there is no standard care practice in intensive care that focuses on the patient's family. Families can only see their patients during patient visits and receive limited information from healthcare personnel. Understanding the needs of families provides guidance for nurses, physicians, and other members of the care team in designing interventions to assist families. This study aimed to identify the needs of families of patients in ICUs, the psychological distress and social support levels of these families, sociodemographic factors associated with their needs, and the relationships between family needs, psychological distress, and social support.

Research question:

What are the relationships between the sociodemographic factors related to the needs of individuals and the family needs, psychological distress and social support?

Methods

Study design

This study was conducted with a descriptive and cross-sectional design. Descriptive studies are also important because they often provide the first important clues about the possible determinants and course of a disease (35). In cross-sectional survey studies, the universe and sample are large. Different variables are measured at once (36). For this reason, this method was chosen in this study.

Setting

The hospital where the study data was collected is located in the city center and serves a population of 376 thousand and has a capacity of 318 beds, 38 of which belong to tertiary. Anesthesia and reanimation intensive care unit. The nurse-to-patient ratio is 2:1 for level 3 intensive care patients. The service where the research was conducted is the 30-bed Anesthesia and reanimation intensive care unit. In this intensive care unit, the relatives of the patients are informed both verbally and in writing. The doctor is responsible for this. As a standard, the relatives of the patient who is admitted are first informed verbally and then their written consent is obtained. The individual differences of the informants do not affect the study because all informants provide the same information and use the same information text.

Participants

The length of stay of patients in the hospital varies since it is a tertiary intensive care unit. A total of 60 nurses works in the service. One of the researchers works as a nurse in the clinic where the data was collected and carried out the data collection process. The purpose of the study was explained to the families and their consent was obtained from those who agreed to participate in the study.

The inclusion criteria were being a first-degree relative of a patient hospitalized in the ICU (spouse, parent, child or sibling), being at least 18 years of age, having a patient who completed their first 24 h in the ICU, and agreeing to participate in the study. This group was included in the study because it was thought that first-degree relatives responsible for patient care may

experience more distress than other relatives. The sample of the study excluded individuals who did not agree to participate, those who were family members of patients who had not completed the first 24 h of their ICU stay or whose patient was hospitalized in intensive care at least six months ago (as family members who have patients in the ICU for durations longer than six months adjust to the process, their needs and expectations may vary), and those who filled out the data collection forms incompletely. The first 6 months in the intensive care unit have been associated with higher anxiety and stress (37).

The sample calculation of this study was conducted by employing the sampling method in known states of the universe (38). To examine the prevalence of the event in sample calculation, the formula used to determine the number of individuals to be included in the sample was used.

The number of patients admitted to hospital is an average of 1160 people per year. When the deviation to be made by the prevalence of the event is applied to the formula, 166 individuals were included in the sample. https://www.calculator.net/ site, the universe is 1160, the frequency of the event is 10%, the confidence interval is 95%, and the margin of error is 5%, the sample is 124. Considering the possibility of incomplete filling of the scales, the study was completed with 166 people. Cohen's d was used to determine effect sizes: small ($d \leq 0.2$), medium ($d \cong 0.5$), or large ($d \geq 0.8$) effects (39). Post hoc power analysis was performed using independent groups t-test analysis with a 95% confidence interval and a significance level of $p = 0.05$. The power analysis showed that this study was sufficiently powered (Effect size = 0.67). It is done to determine whether the sample size is sufficient or how powerful the study is to test the hypothesis. The post-hoc power analysis was performed with the data of the study. At the end of the study, the power was 0.99, when the effect size, p value, and sample size were 0.67, 0.05, and 166, respectively.

Data collection

One of the researchers explained the objectives of this study to the participants visiting their family members in the ICU and obtained their informed consent. Data were collected between February and August 2023. The purpose of the study was explained to family members who came to visit the patient. Individuals who met the inclusion criteria for the study were asked to fill out the forms.

Measurement instruments

Personal information form

This form included questions on the demographic characteristics of the participants, such as age, gender, and education level, and other questions on variables, such as their frequency of visiting the hospital and their experience in caregiving.

Critical care family needs inventory (CCFNI)

The original form of the scale was developed by Molter (40), and its validity and reliability were tested in Turkish by Büyükçoban et al. (41). Each item of the scale has Likert-type response option scored in the range of 1-4. Higher scores reflect a higher degree of need. Although the overall Cronbach's alpha internal consistency coefficient of the scale was reported as 0.93, the coefficients of its subscales varied from 0.83 to 0.92. The minimum and maximum possible scores on the scale are 40 and 160 (41). The scale consists of five subscales: information (e.g., 'To know exactly what is being done for the patient'), assurance/ proximity (e.g., 'To feel close to the patient'), support/ comfort (e.g., 'To feel accepted by the hospital staff'). In this article, the alpha value of the scale was found to be 0.91.

Kessler psychological distress scale (K10)

The scale, developed by Kessler et al. (42), was adapted to Turkish by Altun et al. (43). It includes 10 items about non-specific psychological distress and measures the degree of depressive symptoms within the last four weeks and those that are experienced

at the moment. (e.g., How often have you felt the following about yourself this month: extremely tired, irritable, etc. for no apparent reason?...) It is a 5-point Likert-type scale where each item has response options varying from 1 (none of the time) to 5 (all of the time). The minimum and maximum possible scores on the scale are 10 and 50. Higher scores are interpreted as higher levels of psychological distress. The scale score is evaluated according to the minimum and maximum score range that can be obtained from the scale. The internal consistency coefficient of the scale was reported to be 0.95 (43). In this article, the alpha value of the scale was found to be 0.79.

Multidimensional scale of perceived social support (MSPSS)

MSPSS was developed by Zimet et al. (44). and adapted to Turkish by Eker et al. It is a 7-point Likert-type scale that consists of 12 items and 3 subscales indicating sources of social support: family, friends, and significant others (45). (e.g., My family (e.g., my mother, father, spouse, children, siblings) tries to help me.) In Eker and Arkar's study, it was found that the scale had high consistency levels with reliability coefficients ranging between 0.80-0.95 (45). In this article, the alpha value of the scale was found to be 0.96.

Statistical analysis

The collected data were analyzed using the SPSS software package (version 25.0, SPSS Inc., Chicago, IL, USA). The independent variables of the study were calculated with frequency. Mean and Standard Deviation were used as the basic statistical terms of the scales. Normality of the data was checked with the Kolmogorov-Smirnov test.

Pearson correlation coefficient (r) and independent t tests were used to test relationships and correlations. Comparison of independent variables and scale scores was calculated using One way ANOVA analysis and Tukey test. The effect sizes of the mean differences were calculated using Eta-squared (46).

The level of significance was set at 0.05.

Ethical considerations

Approval was received from the university's ethics committee (Ethics number: 2023-16, Date: 23.02.2023) (Ethic number (IRB number:): 2023-16, Date: 23.02.2023). Informed consent forms were obtained from the participants. All procedures of the study complied with standards for human participation research (e.g., the Declaration of Helsinki).

Results

Participant characteristics

Table 1 shows the socio-demographic characteristics of the participants. This study included family members of patients hospitalized in the ICU, and 166 participants filled out the data collection forms (response rate: 95%). While 60.2% of the participants were female, 38% had undergraduate or higher degrees. It was determined that 50.6% of the participants were not cohabiting with their patients. The percentage of participants who were residing in the city where the hospital is located was 72.3%. The mean age of the participants was mean=42.14 (SD=16.80), while 66.2% of them visited their patients more frequently than once a week (Table 1).

Scale scores of the participants

Table 2 shows the average scores of the participants on the scales. The participants had a mean total Critical Care Family Needs Inventory score of mean=135.51(SD=18.49) (high level), while their mean subscale scores were mean=38.45(SD=5.23) for information, mean=20.89(SD=3.08) for assurance, mean=24.12±3.84 for proximity, mean=32.04(SD=7.05) for support, and 19.99±3.36 for comfort. The mean K10 score of the participants was mean=25.77(SD=9.99). According to the scores, the participants had potentially moderate levels of psychological distress. The participants had a mean total MSPSS score of mean=68.62(SD=15.54) (high level), whereas their mean subscale scores were mean=22.39(SD=5.89) for the family dimension,

mean=22.50±5.79 for the friend dimension, and mean=23.72(SD=4.96) for the significant other dimension (Table 2).

Table 1. Sociodemographic characteristics of participants (n=166)

Characteristics	n	%
Gender		
Female	100	60.2
Male	66	39.8
Education level		
Primary school	50	30.1
Secondary school	53	31.9
High school or higher level	63	38.0
Cohabiting with their patients		
Yes	82	49.4
No	84	50.6
Residing in the city where the hospital is located		
Yes	120	72.3
No	46	27.7
Frequency of visiting the patient		
More than once a week	110	66.2
Less than once a week	56	33.8
	Mean	**Standard Deviation**
Age	42.14	16.80

Table 2. Mean scores of participants in critical care family needs inventory, kessler psychological distress scale and the multidimensional scale of perceived social support scale (n=166)

Scales	Mean ± SD
Critical Care Family Needs Inventory	135.51±18.49
Information	38.45±5.23
Assurance	20.89±3.08
Proximity	24.12±3.84
Support	32.04±7.05
Comfort	19.99±3.36
Kessler Psychological Distress Scale	25.77±9.99
The Multidimensional Scale of Perceived Social Support Scale	68.62±15.54
Family	22.39±5.89
Friend	22.50±5.79
Significant other	23.72±4.96

Abbreviation: SD, standard deviation

Comparisons of the Critical Care Family Needs Inventory scores of the participants based on their sociodemographic characteristics

Table 3 shows the relationship between the Critical Care Family Needs Inventory score according to the socio-demographic characteristics of family members. Among the Critical Care Family Needs Inventory subscales, significantly higher information, assurance, proximity, and comfort scores were found among the participants who were high school graduates compared with those who had university degrees and among those who visited their patients more frequently than once a week compared with those who visited their patients less frequently than once a week. The size of the mean differences was moderate (eta squared = .077) for the difference between educational levels. And also the size of the mean differences was moderate (eta squared =.054) for the difference between frequency of visiting the patient.

The subscale Critical Care Family Needs Inventory scores of the participants did not vary significantly based on whether the patient lived in the same city as the hospital, gender, or whether the caregiver lived with their patient.

Relationships between Critical Care Family Needs Inventory, Kessler Psychological Distress Scale, and Multidimensional Scale of Perceived Social Support scores of participants

Table 4 shows the correlation between the scales. A positive and statistically significant relationship was identified between the Critical Care Family Needs Inventory and MSPSS scores of the participants. On the other hand, no significant relationship was found between their Critical Care Family Needs Inventory and Kessler Psychological Distress Scale scores (Table 4).

Table 3. Comparing critical care family needs inventory levels in terms of socio-demographic characteristics of the participants (n=166)

	Information	Assurance	Proximity	Support	Comfort
Characteristics	**Mean ± Standart Deviation**	**Mean ± Standart Deviation**	**Mean ± Standart Deviation**	**Mean ± Standart Deviation**	**Mean ± Standart Deviation**
Gender					
Female	38.39±5.31	20.99±2.97	24.09±3.66	32.21±6.24	20.24±3.16
Male	38.54±5.13 p=0.852	20.75±3.25 p=0.636	24.16±4.11 p=0.900	31.80±8.17 p=717	19.62±3.64 p=247
Education level					
Primary school (50)	38.28±5.46	20.14±3.33	23.62±4.76	30.88±6.40	19.90±3.37
Secondary school (53)	40.43±3.93	22.05±2.54	25.60±2.43	33.84±8.48	21.0±3.09
High school or higher level (63)	36.92±5.51 **p=0.01** 2 > 3	20.52±3.04 **p=0.003** 2>1, 3	23.26±3.67 **p=0.002** 2>1,3	31.46±5.95 p=071	19.22±3.40 **p=017** 2>3
Cohabiting with their patients					
Yes	38.54±5.54	20.96±3.27	24.19±3.86	32.42±6.10	19.90±3.44
No	38.35±4.94 p=0.814	20.83±2.89 p= 0.787	24.04±3.84 p=0.805	31.67±7.89 p=0.496	20.08±3.29 p=730
Frequency of visiting the patient					
More than once a week (110)	39.35±4.91	21.52±2.80	24.80±3.70	32.50±6.55	20.40±3.37
Less than once a week	36.67±5.42 **p=0.002**	19.66±3.25 **p=0.000**	22.78±3.77 **p=0.001**	31.16±7.92 p=0.249	19.19±3.22 p=0.29
Residing in the city where the hospital is located					
Yes	38.54±5.54	20.96±3.27	24.19±3.86	32.42±6.10	19.90±3.44
No	38.35±4.94 p=0.814	20.83±2.89 p=0.787	24.04±3.84 p=0.805	31.67±7.89 p=496	20.08±3.29 p=0.730

* p< .005

Table 4. Correlations with the critical care family needs inventory, kessler psychological distress scale and the multidimensional scale of perceived social support scale

		Critical Care Family Needs Inventory	Psychological Distress Scale	The Multidimensional Scale of Perceived Social Support Scale
Psychological Distress Scale	r	-0.076	1	-0.023
	p	0.331		0.771
The Multidimensional Scale of Perceived Social Support Scale	r	0.400*	-0.023	1
	p	**0.001**	0.771	

* p< .001

Discussion

The participants in this study had a mean total Critical Care Family Needs Inventory score at a high level, a high MSPSS score, and a moderate level of psychological distress. Secondary school graduates had higher information, assurance, proximity and comfort scores than high school graduates. Those who visited their patients more often than once a week had higher information, Assurance, Proximity, and Comfort scores. A positive and statistically significant relationship was identified between the Critical Care

Family Needs Inventory and MSPSS scores of the participants.

One of the first steps in providing appropriate care to intensive care patients and their families is the accurate assessment of their needs (26). The family members of intensive care patients who participated in this study had a mean total CCFNI score of mean=135.51(SD=18.49), as well as high mean scores on all CCFNI subscales, which indicated a high degree of need. The greatest degrees of need among the participants were found to be in the domains of information and support. Coşkun and Kol found a high mean comfort subscale score among family members (47). In another study, it was stated that families with patients in intensive care needed to be supported by healthcare personnel (48). As opposed to the results of this study, Elsayed et al. reported that family members had the greatest degree of need in the domains of assurance and anxiety reduction (49). Kang et al. (50). also found that the greatest degree of need among families was in the domain of assurance, followed by the domain of information. According to Salameh et al. (12), families had the greatest degree of need in the assurance domain. Meneguin et al. (33), on the other hand, reported that the highest scores of families were in the proximity domain. Haave et al. (27) observed that families were less satisfied with the information they received and their decision-making processes. A previous study revealed that family members needed information about the current status of their patients (3). Chang et al. (31) stated that most first-degree family caregivers needed to discuss the medical situation (79.3%), obtain information about the treatment of the condition (51.7%), and receive psychological support (24.1%). Although the needs of families vary according to the research results, the high level of needs shows that healthcare personnel working in these clinics should be more sensitive to family needs. Since the family's inability to participate in care and lack of support cause psychological distress in families, the benefit of including the family in the care process, the importance of communicating with family members, and the need to support the family with psycho-education are emphasized (51). Intensive care unit nurses play a key role in supporting families by providing them with a sense of assurance and helping them cope with experiences they find distressing (52). Family members describe the support they receive from ICU nurses as very important to them in terms of coping with the situation and understanding what is going on (27). According to the results of this study, it may be beneficial to inform those who lack information about the needs of their families and to provide support in this direction to those who lack social support.

Although the contexts in which families have needs differed in different studies, the findings that these families have a high degree of need show that the healthcare personnel working at these clinics should be more perceptive of these needs. Because inadequate family involvement and support are associated with familial problems and negative psychological health outcomes during ICU care, it was recommended to involve the family in the care process, communicate with the family members with a structured approach, and provide family support through psychoeducation programs (51). Intensive care nurses play a crucial role in supporting families to provide them with a sense of assurance and help them cope with experiences that they find distressing (52). Family members of ICU patients defined the support they received from ICU nurses as highly important for them to cope with their situation and understand what was happening (27). Considering the results obtained in different studies, it could be beneficial for nurses to provide information to families according to their areas of need. In addition, including the patient and family in the intensive care team will positively affect the patient's quality of care in the post-discharge period.

In this study, according to their scores, the participants had potentially moderate levels of psychological distress. In another study, family members of patients in the ICU were found to have high levels of psychological distress (72% had anxiety symptoms, 45% had depressive symptoms, and 42% had both)

(19) Olabisi et al. (53). reported that the rate of stress in family members with patients in the ICU was 10%. Kang et al. (50). determined that family members of patients were psychologically in distress. In another study, it was discovered that family members with critical patients in the ICU had high levels of anxiety, depression, and stress, and there were moderate to severe symptoms of psychological distress that negatively affected both the patient and their family (2). It was observed that family members of ICU patients had high levels of anxiety and moderate levels of perceived social support and satisfaction with the ICU (29). The results of our study were similar to those in literature. Patient families are anxious about their patients hospitalized in the ICU, and they may have worries regarding the critical state of these patients. Families experiencing these negative emotions can be psychologically relieved if nurses inform them at regular intervals and support them when needed. Providing family members with skills for coping with stress may be beneficial in reducing psychological distress. As a method of coping with stress, the nurse can provide breathing and relaxation exercise training, use social support factors, and apply meditation, yoga and peer support training. In addition, involving the family in the care process provides comfort and support for the patient and benefits the family member as it creates a feeling of contributing to the patient's healing process (25). Strategies such as establishing therapeutic communication with the family, informing the family about the patient's condition, allowing family members to be with the patient during the procedures, and flexible visitation policies also help families overcome this stressful situation (14). Health policies should include families in intensive care patient care protocols and interventions should be implemented according to the needs of families as a routine care procedure.

The participants of this study, who were high school graduates, had significantly higher CCFNI scores in the domains of information, assurance, proximity, and comfort in comparison to the participants who had university degrees. In contrast, Baltalı et al. (2022) reported that family needs did not vary depending on education level (54). Salameh et al. (2020), on the other hand, found that the need for assurance, proximity, and support increased in the group with high education levels (12). Elsayed et al.stated that family members with low education levels had an increased need for information (49). According to the report by Terzi et al. as education levels increased, the CCFNI subscale (information, assurance, proximity, and comfort) scores also increased (55). In the study performed by Alsharari et al. family members with high levels of education considered the domains of assurance, proximity, and information in the context of CCFNI (18). Lower health literacy of low-educated participants may have led to this result. The planning of education programs by nurses prioritizing individuals with low education levels may be beneficial to this group of individuals. Additionally, supporting digital literacy can also help these individuals.

In our study, the participants who visited their patients in the ICU more frequently than once a week had significantly higher CCFNI assurance, proximity, and information subscale scores. Elsayed et al. found that the social support need score was higher in people who visited their patients for the first time (49). Alsharari et al. reported that the frequency of hospital visits did not affect the needs of family members (18). Visiting the patient frequently may have increased the needs of the participants of this study in this context by promoting their desire to constantly check the status of the patient. This suggests that more frequent visitors developed higher emotional involvement, which may have led to increased anxiety. It is important to give sufficient information to the family members of the patient, answer their questions, and try to support them in their areas of need at every patient visit. Since the workload of intensive care units is high, sufficient healthcare personnel must be employed so that nurses can spare time for these. Structured family education programs be introduced in ICUs to alleviate distress. Authorities that determine health policies and hospital managers should support personnel recruitment to increase the number of

nurses per patient. Supporting the patient's relative makes it easier for both the family and the patient to adapt to the post-discharge process.

In this study, a positive significant relationship was identified between the CCFNI and MSPSS scores of the participants. In another study conducted with patient relatives, MSPSS scores were found to be negatively associated with anxiety, depression, burnout, hostility, and psychological distress (56). Terzi et al. stated that family members who reported having someone who supported them had higher scores on the CCFNI subscales (55). Another important need for families of intensive care patients is their need for support that will help them manage this stressful situation better and make their expectations about the progress of intensive care patients more reasonable (57). In a study conducted in Taiwan, it was determined that most families with patients in the intensive care unit needed information about the patient's medical condition and treatment and extra support such as psychological support (31). In another study conducted with family members who had patients in the intensive care unit, it was found that having low/moderate levels of perceived social support was associated with higher stress level and lower family satisfaction (32). This study shows that there is a significant relationship between the social support received by the families of patients and their family needs. This finding indicates that social support of patients' families plays a critical role in meeting family needs. This is a protective factor for both the patient and the caregiver. Peer support programs could help address family distress. It may also be beneficial to make families aware of existing social support resources and enable them to benefit from them.

In this study no significant relationship was found between their Critical Care Family Needs Inventory and Kessler Psychological Distress Scale scores. This finding suggests that qualitative studies should be conducted on how families feel when their needs are not met. With in-depth interview techniques, both the factors affecting families' needs and the factors affecting their psychological distress can be determined.

Limitations

One of the limitations of this study was its descriptive cross-sectional design. This research does not have a methodology of establishing cause and effect relationships. Another limitation was that the intensive care patients whose family members were included in the study were not categorized or analyzed based on their different illnesses. The needs of family members may differ depending on the type of illness and its severity. Future studies are recommended to include analyzes of different diagnoses. Another limitation of the study is the lack of questions about the relationship between the patient and the family, the duration of the patient's stay in the clinic, and the patient's comorbidities. The sample consisted of individuals who could be reached and agreed to participate in the study. Individuals with very high psychological distress or who could not be reached were not included in the study. This was another limitation of the study. The study could have been enriched with qualitative interviews to explore why participants had specific needs. Since the study was conducted in a single hospital, results may not represent all ICU settings in Türkiye.

Conclusion

This study showed that family members who had patients hospitalized in the intensive care unit needed support mostly in the areas of information and support, experienced potentially moderate levels of psychological distress, and had high levels of perceived social support. It was determined that as the education levels of the participants decreased and as their frequency of visiting their patients increased, their needs also increased. A positive and significant relationship was identified between family needs and perceived social support levels. Meeting the needs of family members will increase the quality of patient care. It is believed that the most significant and largely unmet needs of family members should

be constantly assessed, and these needs should be met by intensive care nurses. Including family members as part of the treatment team in the care process will positively affect the quality of care. It is recommended that special studies be conducted with family members. In addition, improving the number of healthcare personnel in healthcare institutions can directly positively affect care.

Ethical approval

This study has been approved by the Kocaeli Derince Training and Research Hospital Clinical Research Ethics Committee (approval date: February 23, 2023, number: 2023-16). Written informed consent was obtained from the participants.

Author contribution

Study conception and design: SD, YCÖ, EE; data collection: EE; analysis and interpretation of results: SD; draft manuscript preparation: SD, YCÖ, EE. The author(s) reviewed the results and approved the final version of the article.

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Conflict of interest

The authors declare that there is no conflict of interest.

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