Original Article

Studying the Relationship between Resilience and the Needs of Family Members of Patients Hospitalized in Intensive Care Units

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Abstract

Providing family-oriented care and paying attention to the families of patients hospitalized in special care units is one of the necessities of special care units. On the other hand, resilience is one of the components of mental health that increases a person's ability to adapt positively in stressful situations. The current study aimed to determine the relationship between the needs and resilience of family members of patients admitted to special care units. The current research is a cross-sectional, descriptive, and correlational study. To collect information, demographic questionnaires, Connor and Davidson's resilience questionnaires, and questionnaires for assessing the needs of families of patients admitted to the special care department were used. Based on the findings of this research, the average score of family needs was 143.14 with a standard deviation of 21.75, which showed a high level of needs. The highest need of family members was associated with the dimension of assurance and information and the lowest need was associated with the dimension of support. The mean resilience score was 70.04 with a standard deviation of 16.89, which shows that the family members had acceptable resilience. According to the adjusted score in examining the resilience score of family members, the highest score was associated with the dimension of spirituality, and the lowest score was associated with the dimension of control. There was a direct and significant relationship between resilience and all dimensions of family needs (P < 0.05). Increasing the knowledge and awareness of nurses regarding the needs, the state of mental health, and the resilience of family members of patients hospitalized in special care units can improve resilience and reduce psychological consequences.

Keywords: Resilience, Patients, Intensive care units, Nurses

Introduction

Life-threatening diseases and subsequent hospitalization in the Intensive Care Unit often occur unexpectedly and without warning, and the patient and family do not have much time to prepare to face it [1-3]. They have to face the hard reality that they will face a new environment, unknown consequences, or even the death of their patient

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[4, 5]. Relatively, five million patients are admitted to intensive care units every year [6]. Various factors such as the critical condition of the patient, the use of ventilators, sedative drugs, delirium, coma, and other such factors have led to the fact that almost three-quarters of the patients admitted to the ICU are not able to participate in their treatment decisions [7]. Family members often have in-depth knowledge about the patient's physical, mental, social, and emotional health history and enable more effective interaction with the patient for medical personnel [8]. Therefore, doctors and nurses must rely on their family members to make decisions about treatment methods, which adds to the burden of pressure imposed on family members and their emotional needs [7].

The ICU is one of the most stressful places in the hospital. Statistics show that on average one out of every five patients hospitalized in the ICU dies during hospitalization or shortly after discharge from the ICU [9]. This high rate of death along with the stressful conditions related to special care units such as advanced technical and medical equipment, constant monitoring of patients, device alarms, and other such cases make every member of the patient's family affected by the experience. Therefore, some believe that families experience more hardship and suffering than their patients, because the patient may not be aware of his emotional situation due to the special medical condition [10]. These stressful factors and the interaction of patients' families to overcome or adapt to stressful and critical conditions, because of the creation of massive and new psychosocial needs that make the family prone to vulnerability [11].

Studies have shown that family members of intensive care patients need information, reassurance, support, comfort, and proximity to their patients [12-14]. Among these, most studies have reported the need for information and assurance as the most important psychosocial needs of the family of patients admitted to the intensive care unit [1, 12, 15-18].

One of the modulating and effective factors on the amount of mental damage and emotional crisis created in family members is the state of their mental health and their ability to adapt to the circumstances [4]. Meanwhile, one of the components of mental health is the concept of resilience. Psychological resilience is a complex construct that describes a person's ability to positively adapt to a stressful situation or injury [7] and deals with the issue that a person can overcome problems despite being exposed to extreme pressures and risk factors [19].

The results of many studies have confirmed the recent definition that resilience is a dynamic process that can grow or decrease and is affected by life experiences [20]. Resilient people adapt to conditions faster, can plan for long-term goals, recover from injury faster, and are less anxious and disturbed when faced with it. On the contrary, people with low resilience act in a rigid and dry manner in stressful situations, which leads to maladaptive behavior, and suffer from stress for a longer period when faced with problems [21]. The resilience of the family is a foundation for facing the crises and continuous challenges of the family and affects the whole family and the relationships of the members [20].

Resilience in family members of patients hospitalized in ICU and Sottile *et al*. [22] investigated its relationship with the psychological burden on them in 2016. The findings of this research revealed that a higher resilience score in the patient's family members is significantly associated with a lower incidence of anxiety, depression, and acute stress symptoms [22].

Considering the importance of providing family-centered care in intensive care units and the need to pay attention to the mental health status of family members of patients hospitalized in these units, the current research aims to determine the relationship between the needs and resilience of family members of patients hospitalized in intensive care units of the hospital.

Materials and Methods

The current research is a cross-sectional study of descriptive communication (correlation) type. The statistical population of this research was family members of patients hospitalized in special care units. The study inclusion criteria include an active family member in the care process (father, mother, sister, brother, wife, and child of patients) in the age group between 18 and 60 years old, whose patient was admitted to the intensive care unit for any reason and passed It was at least 24 hours since hospitalization. Family members who had a known history of mental illness based on self-report, whose patient was dying, or who did not want to cooperate and participate in the study, were not included in the study. The criteria for leaving the study was discharge or death of the patient for any reason during the data collection process.

In this study, G Power software version 1.3 was utilized to determine the sample size. The sample size according to the communication correlation study design and taking into account the possible statistical tests for data analysis and based on the correlation coefficient reported in the most relevant similar article (r = 0.24) and taking into account the first type error of 0.05 and the second type error was 0.1 (power 0.9), the sample size was estimated to be 142 people [22]. Sampling of this research was done by available methods. In this way, after conducting administrative correspondence, obtaining the necessary permits, presenting letters of introduction to the officials of the special care departments, and providing the necessary explanations about the objectives of the study and the method of its implementation, by identifying the main member of the patient's family and obtaining his consent to collect data paid to identify the active member of the family according to the entry criteria, the researcher also

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used the guidance of nurses working in the special care department. After introducing themselves to the research sample, providing information about the goals of the project, and obtaining informed consent, they were asked to complete the relevant questionnaires. When the participants answered the questions, the researcher was with them to answer possible questions about the questionnaire and how to complete it. Among the 150 questionnaires answered by the participants, 145 questionnaires were completely and correctly completed and entered the analysis stage. The method of data collection in this study was by using a questionnaire and in the form of self-report. The first part of the questionnaire includes the personal profile form, examining demographic and clinical information, including questions on age, relationship with the patient, gender, marital status, education level, employment status, patient gender, patient diagnosis, number of family members, reason for hospitalization, and duration. The patient's stay was in a special ward. The second part included the Connor and Davidson resilience questionnaire and a questionnaire to measure the needs of the families of patients hospitalized in the special care department.

CD-RISC (Connor-Davidson Resilience Scale) is a 25-question tool that was created by Connor and Davidson [23] to measure the ability to deal with threats and pressure. The basis of factor analysis has five subscales: the first factor (8 questions) shows the concept of individual abilities, tenacity, and high standards; the second factor (7 questions) is associated with trusting one's personal instincts, tolerance of negative factors and the strength of stress effects; the third factor (5 questions) associated with positive acceptance of changes and secure relationships; the fourth factor associated with control (4 questions); and the fifth factor (2 questions) shows the religion influence, which is scored on a Likert scale between 0 (completely false) and 4 (always true). The minimum score of a person's resilience on this scale is 0, its maximum score is 100, and the average score of this scale is 52. In addition, the higher the subject's score is above 52, the more endurance, and the closer it is to zero, the less endurance. In this study, 20 samples were used to check the questionnaire's reliability, and Cronbach's alpha was reported as 90%.

Molter presented a list of family needs for the first time in 1979 [24] and 7 years later, with his collaboration, the first questionnaire for assessing family needs of patients hospitalized in critical care (CCFNI) was designed by Leske [25]. This questionnaire includes 45 items on the family needs of patients hospitalized in ICU, which are scored according to the Likert scale and in five dimensions: Assurance, Information, Comfort, Proximity, and Support. The minimum score on this scale is 45 and the maximum score is 180. To check the reliability of this questionnaire, Cronbach's alpha method was used on 20 participants and the alpha level was reported as 0.94.

Finally, descriptive statistical methods such as absolute and relative frequency, analysis of variance, independent t-test, mean, standard deviation, and Pearson and Spearman correlation coefficients were used to analyze the data. Statistical calculations for the collected data were performed using SPSS version 23 software and a 0.05 was considered as significance level.

Results and Discussion

The average age of the research subjects was 39.17 with a standard deviation of 10.34 years. The most frequent age category was in the category of less than 40 years (54.5%). Other demographic characteristics are given in **Table 1**.

Table 1. Frequency distribution of demographic characteristics of family members of patients hospitalized in special care units.

Variable		Frequency (Percentage)	Variable		Frequency (Percentage)
Age (years)	< 40	54.5	Level of education	Under diploma	23.4
	40-49	29		Diploma	29.7
	≥ 50	16.5		University	46.9
Cause of hospitalization	Because of the corona disease	40	Gender	Female	57.9
	Due to a disease other than coronavirus	60		Male	42.1
Length of stay in ICU (days)	1-3	46.2	Marital status	Single	19.3
	3-5	20.7		Married	75.9
	5-7	9		Divorced	3.4

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	>7	24.1	Widow	1.4
Family relationship with the patient	Father	6.9	Unemployed	10.3
	Mother	8.3	Employee	22.1
	Sister	10.3	Freelance job	31.7
	Brother	5.9	Housewife	29.7
	Wife	10.3	Retired	6.2
	Child	57.2		
Patient condition	Conscious	56.6	Number of family members — 1-4	54.1
			5-9	43.8
	Unconscious	43.4	≥10	2.1

The findings of the study revealed that the average and standard deviation of the family needs score were 143.14 and 21.75, respectively, which shows a high level of needs. Due to the different scope of dimensions, the adjusted score based on the following formula was used to determine the most important and least important dimensions from the point of view of families.

$$Adjusted\ score = \frac{Raw\ score - Minimum\ possible\ score}{Maximum\ possible\ score - Minimum\ possible\ score} \times 100 \tag{1}$$

According to the adjusted score, the highest need of the family members was associated with the assurance and information dimension, and the lowest score was associated with the support dimension **(Table 2)**.

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Table 2. Mean and standard deviation of the needs of family members of patients hospitalized in special care units.

Family needs and dimensions	Mean	Standard deviation	Adjusted score
Information (8-32)	27.80	5.24	82.5
Confidence (7-28)	25.33	3.28	87.2
Proximity and closeness (9-36)	29.91	5.07	77.4
Support (15-60)	42.18	9.15	60.4
Comfort (6-24)	17.90	3.97	66.11
Total family needs score (45-180)	143.14	21.75	-

The findings revealed that the Mean and SD of resilience were 70.04 and 16.89, respectively, which shows that the family members had high resilience. Due to the different scope of dimensions, the adjusted score based on the following formula was used to determine the most important and least important dimensions from the point of view of families. According to the adjusted score, the highest score was associated with the dimension of spirituality, and the lowest score was associated with the dimension of control **(Table 3)**.

Table 3. Mean and standard deviation of resilience scores of family members of patients hospitalized in special care units.

Resilience and its dimensions	Mean	Standard deviation	Adjusted score
The idea of individual competence (0-32)	23.18	6.81	72.43
Trust in individual instincts to tolerate negative emotions (0-28)	17.73	5.07	63.32
Positive acceptance of change and secure relationships (0-20)	14.12	3.89	70.6

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Control (0-16)	8.67	2.57	54.18
Spirituality (0-8)	6.3	1.95	78.75
Total resilience score (0-100)	70.04	16.89	-

The Pearson correlation test was utilized to investigate the relationship between resilience and the family needs of the research subjects. The results revealed that there is a direct and significant correlation between resilience and family needs (P = 0.015), in the sense that family needs increase with resilience **(Table 4)**. This correlation was equal to 0.2 and weak. The results revealed that there is a direct and significant correlation between resilience and all dimensions of family needs. The highest correlation was observed with the dimension of convenience (r = 0.216) and the lowest with the dimension of information (r = 0.164). The findings revealed that there is a significant and direct correlation between the needs of the family and all dimensions of resilience, except positive acceptance of change and secure relationships (P = 0.143), meaning that the needs of the family increase with the increase of resilience. Although this correlation was weak, the highest correlation was with the dimension of control (r = 0.269) and the lowest was with the dimension of perception of individual competence (r = 0.182).

Table 4. Correlation between needs and resilience of family members of patients hospitalized in intensive care units.

Family needs \\ Resilience	Information	Confidence	Proximity and proximity	Support	Convenience	Family needs
Perception of individual competence	r = 0.11	r = 0.12	r = -0.02	r = 0.14	r = 0.20	r = 0.182
	P = 0.20	P = 0.14	P = 0.80	P = 0.07	P = 0.00	P = 0.028
Trusting individual instincts-tolerating negative affect	r = 0.06	r = 0.15	r = 0.072	r = 0.20	r = 0.18	r = 0.192
	P = 0.42	P = 0.06	P = 0.39	P = 0.04	P = 0.06	P = 0.020
Positive acceptance of change and secure relationships	r = 0.10	r = 0.12	r = 0.088	r = 0.12	r = 0.11	r = 0.122
	P = 0.20	P = 0.12	P = 0.29	P = 0.14	P = 0.16	P = 0.143
Control	r = 0.23	r = 0.194	r = 0.09	r = 0.238	r = 0.260	r = 0.269
	P = 0.004	P = 0.01	P = 0.27	P = 0.00	P = 0.00	P = 0.001
Spiritual influences	r = 0.20	r = 0.13	r = 0.13	r = 0.20	r = 0.14	r = 0.204
	P = 0.01	P = 0.09	P = 0.12	P = 0.01	P = 0.09	P = 0.014
Resilience	r = 0.164	r = 0.186	r = 0.191	r = 0.205	r = 0.216	r = 0.222
	P = 0.049	P = 0.025	P = 0.021	P = 0.014	P = 0.009	P = 0.015

The purpose of this research was to investigate the relationship between the needs and resilience of family members of patients hospitalized in special care units. Based on the results of the current study, the need for assurance and information were the most important needs of family members of patients hospitalized in special care units, respectively. This result is in line with the findings of the study by Alsharari [26] in which they examined the needs of the family members of patients admitted to the intensive care unit, and in this study, the need for reassurance was the most important from the point of view of the families.

The results of the studies of Hinkle and Fitzpatrick [27], and Gundo *et al*. [28] also in terms of declaring the need to ensure the best possible patient care, answering questions honestly, and feeling that hospital personnel The patients show attention, as the most important needs of the family in terms of confidence, they confirm the findings of the current study. According to the findings of this study, following the dimension of the need for assurance, the dimension of information was the most important from the point of view of family members of patients hospitalized in special care units. This result is in line with the findings of the study by Shorofi *et al*. [29]. In Sharoufi's study, the information dimension was identified as the second most important need of family members. In the study of Auerbach *et al*. [30], the need for information about the patient's condition and the measures that are taken for him was considered the most important need from the point of view of families. The results of Freitas *et al*.'s [31] study, in which they analyzed the needs of family members of patients admitted to the intensive care unit in a public hospital and a private hospital, showed that the families of patients admitted to a private hospital had a higher level of satisfaction. This issue could be due to meeting their information needs. This issue reminds

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us of the importance of proper planning to set times for the daily conversation between the attending physician and the family members of patients hospitalized in special care units.

According to the findings of this study, from the point of view of family members, the aspect of support and comfort is less important than other needs. These findings are in line with the findings of the study by Alsharari [26]. Yang's [32] study showed that family members of patients hospitalized in intensive care units thought that their requests from hospital personnel to meet their comfort needs were inappropriate. Of course, although the families underestimated their need for support, they said that the support of their friends and relatives was comforting. Families expect their loved ones to provide them with emotional support while caring for their patients in the intensive care unit. This support will lead to an increase in close communication and trust among family members [32]. It seems that the participants in the research do not have high expectations from the hospital to provide comfort facilities and have accepted that the families of patients hospitalized in the special care department have to endure some hardships and problems. In addition, according to the research of Yang [32], considering the needs of families as less important does not mean that families do not need support and comfort, but it means that they consider the needs of patients before their own needs [32].

The results of the present study showed that family members had acceptable resilience. The highest score was associated with the dimension of spirituality and the lowest score was associated with the dimension of control. The findings of the study by Sottile *et al.* [22], in which they examined the resilience of family members of patients hospitalized in intensive care units, are in line with the findings of the present study, and the participants had a high mean resilience score. These results were not consistent with the findings of Komachi and Kamibeppu's study [7], which examined the relationship between acute stress symptoms, resilience, and the characteristics of family members of patients in the early stages of hospitalization in intensive care units, and in Komachi's study, only 10.5% Family members had a high resilience score [7], which may be due to different clinical conditions and the non-similarity of the samples. It seems that even if people have high resilience, they still have high and significant needs, so more attention should be paid to family members to meet their need for reassurance and provide sufficient information about the patient's condition and the process of care and treatment. He allows families to regain control of their situation, overcome emotional vulnerability, and gain control over the situation by searching for meaning.

Conclusion

The current study was conducted to determine the relationship between the needs and resilience of family members of patients hospitalized in special care units. According to the findings of this study, the greatest need of family members was related to the assurance and information dimension, and the least need was related to the support dimension. The mean resilience score showed that the family members had acceptable resilience. According to the adjusted score in examining the resilience score of family members, the highest score was associated with the dimension of spirituality, and the lowest score was associated with the dimension of control. There was a direct and significant relationship between resilience and all dimensions of family needs. According to the results of the study, increasing the knowledge and awareness of nurses regarding the needs, the state of mental health, and resilience of family members of patients hospitalized in special care departments can improve resilience and reduce negative psychological consequences by adopting strategies to meet these needs and by implementing educational programs. It is essential to support the family to identify and understand the importance and priority of their needs, to meet these needs properly, and to pay attention to the state of mental health and resilience of families.

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