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Original Article

Evaluation of the Effect of Sociodemographic Characteristics on the Satisfaction of Mothers in Neonatal Intensive Care Units in Turkey

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ABSTRACT

***Background*:** Patient and parent satisfaction is a significant indicator for the evaluation of quality of care in healthcare systems. This study aimed to evaluate the effect of sociodemographic characteristics on the satisfaction of the parents of newborns admitted in neonatal intensive care units (NICUs) in maternity and infant disease hospitals.

***Methods*:** This descriptive study was conducted on 113 mothers with infants admitted in the NICU of a state hospital in Turkey during April 1-September 30, 2013. Data were collected using sociodemographic questionnaire and Pediatric Quality of Life Inventory (PedsQL) healthcare satisfaction scale. Data analysis was performed using descriptive statistics (mean and percentage), T-test, Mann-Whitney U test, and Kruskal-Wallis test.

***Results*:** In this study, mean score of maternal satisfaction with NICU services was 65.66±20.01. No statistically significant differences were observed between maternal age, PedsQL satisfaction subscales, and total score of satisfaction. Moreover, statistically significant associations were observed between the following variables: maternal training and total satisfaction, employment status and subscales of PedsQL, technical skills and general satisfaction, and social security status and emotional support. However, no statistically significant differences were observed between the sociodemographic characteristics of newborns, total score of satisfaction, and mean scores of PedsQL satisfaction subscales in mothers.

Conclusion: According to the results of this study, level of maternal satisfaction with NICU services was higher than the international average. Therefore, it is recommended that NICU nurses offer sufficient emotional support for both mothers and neonates in this unit and allow mothers to stay with their infants during hospitalization. Furthermore, it is suggested that training programs be implemented on effective communication skills between nurses and patients.

Keywords: Intensive care, Maternal satisfaction, Newborn, Sociodemographic factors

Introduction

Patient satisfaction is achieved through meeting the expectations of patients and their relatives by providing the required services (1). Parents are the legal guardians of newborns for receiving healthcare. Therefore, parental perception is considered as a key element in the evaluation of healthcare services for children. Parental satisfaction is directly correlated with the quality of care, and regular assessment of this parameter leads to the enhancement of the quality of healthcare services. Therefore, patient and parent satisfaction is a significant indicator for the evaluation of quality of care in healthcare systems (2, 3).

Assessment of parent satisfaction with the quality of health services is essential for the planning of healthcare in accordance with the expectations of the patients (2, 4). In Turkey, patient care mainly focuses on presenting healthcare services, and the needs of the families of patients are frequently neglected. As such, satisfaction of the families of patients should be measured in different clinical situations in order to improve the quality of care. According to several researchers, proper health care requires a holistic approach towards achieving the satisfaction of both patients and their relatives (5).

In recent years, several studies have been performed in Iran and other countries to evaluate the level of satisfaction among the parents of neonates admitted in different healthcare institutions (5-8). Since admission at the neonatal intensive care unit (NICU) may be prolonged and

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require rigorous treatments, satisfaction of the parents of the newborns admitted in the NICU is of paramount importance.

To date, no studies have been conducted to investigate parent satisfaction with medical services in NICUs. This study aimed to evaluate the satisfaction of mothers with neonates admitted in the NICU with regard to the quality of care. Moreover, we examined the effect of sociodemographic characteristics of the infants and mothers on the level of parent satisfaction.

Methods

Study design and sample selection

This descriptive study was conducted on 113 mothers of the neonates admitted in the NICU of a state hospital in Çanakkale city, Turkey during April-September 2013. Inclusion criteria of the study were as follows: 1) NICU admission for at least 72 hours; 2) age of 0-28 days at the time of admission; 3) birth weight of 1500 grams; 4) gestational age of 30 weeks and 5) parents who stayed with the infants for at least 72 hours in the NICU.

Maximum bed capacity of the NICU in this study was estimated at 30, and number of admissions was estimated at 201 patients within the predetermined times. Excluded subjects from this study were as follows: 58 newborns and parents who did not meet the inclusion criteria, 22 parents who were unwilling to participate in the study and eight parents who refused to complete the questionnaires. In total, sample size of the study was determined at 113 newborns and their parents. The study was performed on the mothers of the neonates as the main patient companions.

Study measures

Data collection tools included the sociodemographic questionnaire developed by the researchers, and Pediatric Quality of Life Inventory (PedsQL) healthcare satisfaction scale developed by Varni et al. (1999) (9). Questionnaires were completed via face-to-face interviews with the mothers after the discharge of neonates from NICU in order to ensure the accuracy of the obtained results. Mothers were asked to complete the questionnaires in a training room within an average of 25 minutes.

The sociodemographic questionnaire was prepared by the researchers consisting of data such as parental age, gender of newborn, gestational age, history of NICU admission, parental education level, employment status, and health insurance status of the parents (2, 5, 8, 10).

PedsQL healthcare satisfaction scale was first translated into Turkish language by Ulus and Dogramaci in 2004 (11). Reliability and validity of this scale has been confirmed in previous studies. PedsQL consists of six subscales of information, family participation, communication, technical skills, emotional support, and general satisfaction. This questionnaire mainly focuses on the level of satisfaction regarding the quality of medical services and psychosocial satisfaction of parents. Psychosocial satisfaction is closely correlated with parental emotional requirements.

Items in PedsQL are scored based on a five-point scale, as follows: never satisfied (score zero), sometimes satisfied (score 1), often satisfied (score 2), frequently satisfied (score 3), and always satisfied (score 4). In addition, PedsQL has another alternative as "not applicable" (N.A), which refers to the services that are restricted based on the age of neonates.

After summing up the obtained scores of PedsQL, mean scores of satisfaction subscales were calculated by excluding the questions replied with the N.A option. For instance, if four out of 25 items in PedsQL were replied with N.A, and the total score was 1575, the mean score of the scale would be obtained by dividing the total score to 21. Higher scores achieved in PedsQL were indicative of the higher satisfaction of parents.

Since the present study was conducted on both neonates and parents, two items (numbers 12 and 19) were excluded from PedsQL since they could not be applied to newborns. Eventually, the scores achieved in PedsQL were calculated for 23 items. Cronbach's alpha coefficient of the original version of PedsQL has been reported to be 0.93, while it was estimated at 0.95 in the present study.

Study variables

In this study, dependent variables were determined based on the mean scores of maternal satisfaction in different subscales of PedsQL, and independent variables included the age and gender of neonate, length of admission in the NICU, and gestational age. In addition, we collected other data of the parents, such as age, education level, employment status, and health insurance status.

Data analysis

Data analysis was performed in SPSS V.16 using descriptive statistics (number, percentage, mean and standard deviation), T-test, Mann-Whitney U test, and Kruskal-Wallis test for the comparison of the study groups.

Ethical considerations

Objectives of the study were explained to the mothers, and informed consent was obtained from all the participants prior to the study.

Results

Characteristics of the studied infants and mothers

In this study, infants were within the age range of 3-38 days with mean age of 8.61±7.76 days. In total, 52.2% and 47.8% of the newborns were male and female, respectively. In terms of the length of admission, 57.5% and 28.3% of the infants were hospitalized for 3-5 and 6-10 days, respectively, while 95.6% were admitted in the NICU for the first time. Mean of gestational age was estimated at 38-40 weeks in 69.9% of the neonates, 30-37 weeks in 23.9%, and 41 weeks or above in 6.2% of the newborns. Moreover, 43.4% and 23.9% of the infants were diagnosed with neonatal jaundice and prematurity, respectively (Table1).

As for the parents, 67.3% of the mothers were within the age range of 21-30 years. The majority of the studied mothers were housewives, 23.9% were employed, 31% had primary education, and 18.6% had social security health insurance.

Maternal satisfaction

In this study, no statistically significant differences were observed between the mean scores of PedsQL subscales and factors such as gender, gestational age, length of hospital stay, number of admissions, and diagnosis of infants. Moreover, no statistically significant associations were observed between the mean scores of PedsQL subscales and maternal age and education level (P>0.05) (Table 2). However, a statistically significant difference was found between the education level of mothers and total score of satisfaction in PedsQL. In addition, statistically significant associations were observed between family participation, employment status of parents, technical skills, and mean scores of general satisfaction in PedsQL.

In terms of the employment status of parents, the results of this study were indicative of no statistically significant difference in the mean scores of the subscales of information, communication, and emotional support in PedsQL (P>0.05). On the other hand, a statistically significant correlation was observed between the mean scores of information and emotional support and health insurance status of the mothers.

Table 1. Sociodemographic Characteristics of Infants and Mothers (n=113)

Variables	N	%
Infants:		
Age (day) Mean±SD	8.61±7.76	
Gender		
Female	54	47.8
Male	59	52.2
Gestational Age (week)		
30-37	27	23.9
38-40	79	69.9
41 or Above	7	6.2
Length of Hospital Stay (day)		
3-5	65	57.5
6-10	32	28.3
11-20	4	3.5
20-30	6	5.3
31 or More	6	5.3
Number of Admissions		
Once	108	95.6
More than Once	5	4.4
Diagnosis		
Jaundice	49	43.4
Prematurity	27	23.9
Respiratory Disorders	18	15.9
Infections	7	6.2
Other	12	10.6
Mothers:		
Age (year)		
20 or Less	9	8
21-30	76	67.3
31-40	28	24.8
Education Level		
Primary Education	35	31
Secondary Education	20	17.7
High School Diploma	23	20.4
Academic Education	35	31
Employment Status		
Unemployed	86	76.1
Employed	27	23.9
Social Security Health Insurance Status		
Yes	92	81.4
No	21	18.6

In this study, no statistically significant difference was observed between the social security status of mothers and mean scores of family participation, communication, technical skills, general satisfaction, and total satisfaction.

According to the results of this study, the highest mean scores of PedsQL were obtained in the subscales of technical skills (11.83±3.90) and information (13.85±5.42), while the lowest scores were achieved in the subscales of emotional support (8.92±3.56) and communication

Table 2. Comparison of Mean Scores of Subscales of PedsQL Healthcare Satisfaction Scale and Sociodemographic Characteristics of Newborns and Mothers

	Subscales of PedsQL Healthcare Satisfaction Scale						
Variables	Information Mean±SD	Family Participation Mean±SD	Communi-cation Mean±SD	Technical Skills Mean±SD	Emotional Support Mean±SD	General Satisfaction Mean±SD	Total Satisfaction Mean±SD
Infants							
Gender							
Female	13.96±5.93	11.00±4.23	10.55±4.07	11.27±3.93	8.94±3.53	8.88±2.96	64.62±21.29
Male	13.74±4.95	10.81±4.46	11.50±3.78	12.33±3.84	8.91±3.62	9.28±2.98	66.61±18.89
Test Results/	*t=0.212	*t=0.227	*t=1.288	*t=1.449	*t=0.043	*t=0.711	*t=0.524
P-value	P=0.167	P=0.229	P=0.349	P=0.841	P=0.785	P=0.808	P=0.294
Gestational Age (week)							
37 or Less	12.62±6.13	11.03±4.55	10.85±4.11	12.07±3.78	8.59±3.96	9.11±3.51	64.29±21.47
38-40	13.96±5.16	11.00±4.28	11.25±3.87	11.73±3.91	9.11±3.44	9.06±2.82	66.12±19.80
41 or More	17.28±4.30	9.28±4.42	9.57±4.27	12.00±4.79	8.14±3.67	9.42±2.76	65.71±19.08
Test Results/	**KW=3.68	**KW=1.38	**KW=1.55	**KW=0.37	**KW=0.92	**KW=0.185	**KW=0.12
P-value	P=0.158	P=0.501	P=0.461	P=0.832	P=0.632	P=0.911	P=0.942
Length of Hospital Stay (day)							
3-5	14.23±4.98	10.72±4.41	10.95±4.09	11.49±3.96	8.53±3.65	8.95±2.94	64.89±20.67
6-10	13.28±6.61	11.21±4.61	10.71±4.19	11.96±4.16	9.21±3.74	8.90±3.26	65.31±21.43
11-20	17.25±3.40	11.25±2.87	13.75±2.62	15.00±1.41	10.00±2.82	10.25±2.36	77.50±14.45
20-30	13.50±5.08	11.33±1.96	12.16±3.06	13.00±2.96	10.33±1.86	10.66±1.36	71.00±4.77
31 or More	10.83±3.48	10.50±5.50	11.00±1.54	11.50±3.56	9.50±3.50	9.33±3.26	62.66±18.31
Test Results	**KW=4.033	**KW=0.580	**KW=3.147	**KW=3.287	**KW=2.111	**KW=1.973	**KW=1.697
P-value	P=0.402	P=0.965	P=0.533	P=0.511	P=0.715	P=0.741	P=0.791
Number of Admissions							
Once	13.79±5.41	10.85±4.32	11.10±3.92	11.89±3.88	8.98±3.61	9.12±3.00	65.75±20.05
More than Once	15.00±6.12	12.00±4.89	10.00±4.58	10.40±4.66	7.80±2.04	8.40±2.40	63.60±21.17
Test Results/	***U=233.50	***U=229.50	***U=202.00	***U=202.00	***U=167.50	***U=203.00	***U=237.00
P-value	P=0.607	P=0.569	P=0.339	P=0.335	P=0.139	P=0.335	P=0.645
Diagnosis							
Jaundice	14.18±5.67	10.93±4.42	11.06±4.21	11.63±4.04	8.59±3.46	9.30±2.84	65.71±21.26
Prematurity	13.07±5.56	11.59±4.08	11.44±3.66	12.92±3.67	9.74±3.26	9.62±2.96	68.40±18.90
Respiratory Disorders	13.83±5.36	10.16±4.66	10.38±3.94	11.61±3.82	7.88±4.57	8.50±3.38	62.38±21.26
Infections	12.85±6.76	11.00±4.83	11.28±4.68	11.14±4.59	9.71±3.59	9.28±2.92	65.28±21.16
Other	14.83±3.53	10.25±4.20	11.00±3.41	10.91±3.67	9.58±2.74	7.83±2.88	64.41±16.70
Test Results/	**KW=0.901	**KW=1.478	**KW=1.052	**KW=4.072	**KW=3.371	**KW=4.591	**KW=1.507
P-value	P=0.924	P=0.831	P=0.902	P=0.396	P=0.498	P=0.332	P=0.825

Continues of table 2.

Mothers:							
Age (year)							
20 or Less	15.11±4.10	9.55±3.53	10.66±3.08	10.66±3.80	8.22±4.05	8.55±2.40	62.77±14.00
21-30	13.63±5.51	11.18±4.15	11.32±3.92	11.96±3.80	9.14±3.53	9.32±2.73	66.57±19.60
31-40	14.03±5.63	10.57±5.03	10.42±4.26	11.85±4.27	8.57±3.57	8.64±3.69	64.10±22.96
Test Results/	**KW=0.538	**KW=1.80	**KW=0.679	**KW=1.090	**KW=0.940	**KW=1.525	**KW=0.877
P-value	P=0.764	P=0.405	P=0.712	P=0.580	P=0.625	P=0.466	P=0.645
Education Level							
Primary Education	15.60±4.21	12.45±3.15	12.17±3.18	12.48±3.37	10.20±2.19	9.77±2.31	72.68±14.68
Secondary Education	14.90±4.70	10.60±3.64	11.50±4.08	12.90±3.19	7.80±3.83	10.00±2.42	67.70±18.22
High School Diploma	12.86±6.23	10.30±5.19	9.30±5.12	10.91±4.91	7.34±4.58	7.82±4.10	58.56±25.27
Academic Education	12.14±5.84	9.91±4.83	10.82±3.33	11.17±3.92	9.34±3.30	8.74±2.71	62.14±20.11
Test Results/	**KW=7.251	**KW=4.675	**KW=6.748	**KW=3.977	**KW=6.996	**KW=5.622	**KW=7.643
P-value	P=0.064	P=0.197	P=0.080	P=0.264	P=0.072	P=0.132	P=0.054
Employment Status							
Unemployed	14.22±5.25	11.00±4.14	11.25±3.97	11.84±3.76	8.96±3.53	9.20±2.81	66.50±19.26
Employed	12.66±5.88	10.59±4.98	10.40±3.83	11.77±4.40	8.81±3.72	8.74±3.47	63.00±22.40
Test Results/	*t=1.303	*t=0.424	*t=0.076	*t=0.082	*t=0.190	*t=0.713	*t=0.792
P-value	P=0.261	P=0.037	P=0.869	P=0.039	P=0.599	P=0.017	P=0.124
Social Security Health Insurance							
Yes	14.02±5.19	10.79±4.37	10.86±3.89	11.85±3.83	8.65±3.71	9.07±3.10	65.27±20.08
No	13.09±6.40	11.38±4.26	11.85±4.11	11.71±4.30	10.14±2.55	9.19±2.37	67.38±20.08
Test Results/	*t=0.705	*t=0.558	*t=1.037	*t=0.152	*t=1.745	*t=0.158	*t=0.434
P-value	P=0.050	P=0.777	P=0.374	P=0.314	P=0.021	P=0.101	P=0.964

*t: T-test; **KW: Kruskal-Wallis test; ***U: Mann-Whitney U test

Table 3. Distribution of Mean Scores of Parents in PedsQL Healthcare Satisfaction Scale

Subscale	Mean	Standard Deviation	Minimum	Maximum
Information	13.85	5.42	0	20
Family Participation	10.90	4.33	1	16
Communication	11.05	3.93	0	16
Technical Skills	11.83	3.90	2	16
Emotional Support	8.92	3.56	0	12
General Satisfaction	9.09	2.97	1	12
Total Satisfaction	65.66	20.01	11	92

Discussion

The present study was performed to evaluate the effect of sociodemographic characteristics of newborns admitted in the NICU and their parents on the level of satisfaction with healthcare services in this unit. Our findings indicated that parent satisfaction was not significantly influenced by the demographic features of the infants (age, gender, diagnosis, gestational age, length of hospital stay, and number of admissions). However, sociodemographic factors such as education level, employment status, and health insurance status of the parents were reported to affect parent satisfaction scores in six subscales of PedsQL (total satisfaction, family participation, technical skills, general satisfaction, information, and emotional support).

In the present study, mean score of total parent satisfaction was estimated at 65.66±20.01, which was lower than the results of previous studies in this regard. For instance, the study by Tokat (5) was

performed to evaluate the level of parent satisfaction in pediatric cardiac NICUs, and the mean score was determined to be 77.00±8.20. On the other hand, level of parent satisfaction was estimated at 74.6% in a study by Asılıoğlu et al. (12) conducted in pediatric emergency units of Turkey.

In this regard, Uysal and Cırlak (7) performed a study on children with acute disorders and determined the mean score of parent satisfaction at 85.89±13.32. In another research, Coban et al. (13) reported the level of general satisfaction to be 67.6% in the parents of children admitted at a polyclinic hospital. The difference with the results of the present study could be due to the variations in study environments. Due to the critical conditions of neonates, NICUs only allow limited visitation for parents, and therefore, the communication between the parents and newborn is interrupted. Furthermore, NICU admission might be prolonged in some cases, and parents must wait for a long time to visit their child. These factors could lead to the psychological anxiety and general dissatisfaction of parents.

In the present study, the lowest scores of parental satisfaction were observed in PedsQL subscales of emotional support and communication, which are the two fundamental areas to affect parent satisfaction. This is consistent with the results of previous studies in this regard. Correspondingly, relatives of patients are commonly dissatisfied with the attitude of NICU nurses and physicians in terms of emotional support and communication (14-17). It is belived that mothers of the neonates admitted at the NICU need the emotional support of medical teams while visiting their infants; therefore, this parameter requires the special attention of healthcare professionals.

In the current research, lack of sufficient emotional support for mothers might have discouraged them from expressing their feelings, which led to the reduction of the obtained scores in the subscale of communication. In addition, lower scores of emotional support and communication in the present study could be due to the fact that in Turkey, medical teams in critical care units merely focus on the quality of healthcare services and disregard the needs of patient companions.

In the present study, the highest scores of parent satisfaction were achieved in the subscales of information and technical skills. This is in line with the findings of Varni et al. (10), which reported parent satisfaction scores to be highest in the subscale of information. Similarly, the results obtained by Ygge and Arnetz (2004) (18) emphasized the importance of information about medical services in increasing the level of parent satisfaction.

Adequate information provided for parents plays a pivotal role in the successful treatment of infants through reducing anxiety and stress, which enables parents to participate in the care of the newborn and confide in the performance of healthcare personnel. However, previous domestic and foreign studies have confirmed the inefficacy of healthcare personnel in providing sufficient information for the parents of children with critical conditions (8, 19, 20). These results are inconsistent with the findings of the current study, which were indicative of the adequacy and reliability of the information provided by the healthcare staff for the parents of the neonates admitted in the NICU. This could be due to the fact that the information was provided during specific times by the nurses or physicians who were directly responsible for the treatment of the neonates in the NICU.

According to the results of the present study, level of satisfaction was higher among the parents with primary education (72.68±14.68), which is indicative of a reverse correlation between the education level and parent satisfaction. In other words, mothers with lower education levels tend to have fewer demands from the healthcare personnel in critical care units. As such, it could be concluded that higher education level increases parental expectations and directly affects the level of satisfaction with healthcare services. In this regard, findings of Quintana et al. (21) and Tucker (22) are consistent with the results of the present study.

Variable hypotheses have been proposed in the literature with regard to the relationship between parent satisfaction and education level. For instance, the results obtained by Uysal and Cırlak (7), Boudreaux et al. (23), Tokat (5), and Apay and Arslan (24) have reported no statistically signifciant correlation between these two parameters, whereas the findings of González-Valentín et al. (25), Asılıoğlu, Akkus and Baysal (12), and Mc Cormick et al. (26) have confirmed that level of parent satisfaction is likely to decline with higher education status.

Evaluation of the relationship between the level of satisfaction and age distribution of mothers in the present study indicated that despite the lack of any statistically significant difference, mean scores of satisfaction were higher in the mothers within the age range of 21-30 years. In this regard, findings of Tsironi et al. (2) and Tokat (5) indicated that level of satisfaction was comparatively higher in younger parents, whereas the results obtained by Aksakal

and Bilgili (27) and Asılıoğlu et al. (12) were indicative of no statistically significant difference between these two parameters. This inconsistency could be due to the fact that the number of parents within younger age ranges is significantly higher compared to other age groups, and young mothers generally have lower expectations from healthcare personnel.

According to the results of the current study, there were statistically significant associations between the general satisfaction of mothers and employment status, as well as the mean scores of family participation and technical skills with the mean scores of total parent satisfaction. According to the literature, unemployed mothers tend to achieve higher scores in the aforementioned subscales of PedsQL. In this regard, the findings of Uysal and Cırlak (7) and Keleş (28) have indicated that employed parents tend to be more satisfied with healthcare services compared to unemployed parents.

Satisfaction of patients and their relatives with the quality of healthcare services depends on the extent to which these services meet the expectations and demands of these individuals (1). In this context, the fact that unemployed mothers generally have lower expectations from the healthcare personnel and are less predictive in perceiving the provided services could explain the higher satisfaction scores in the current research.

According to the results of the present study, evaluation of the correlation between social security insurance status and satisfaction subscales was indicative statistically significant differences between the two subscales of information and emotional support. However, no statistically significant differences were observed in the subscales of family participation, communication, technical skills, and general satisfaction.

According to our findings, mean score of the information subscale in PedsQL was higher among the parents with social security health insurance compared to those without health insurance. On the other hand, mean score of social support was higher among the parents without social security insurance, and this difference was statistically significant. In this regard, the results obtained by Toğun (29) and Akkuş (30) have confirmed that level of satisfaction is relatively lower among the patients with social security health insurance.

In explanation, it could be stated that since parents with social security insurance could demand the required services from healthcare systems with no imposed costs, they are able to communicate and share more information with healthcare personnel, which increases the total parent satisfaction. On the other hand, patients with no health insurance achieved higher scores in the emotional support subscale, which could be due to the fact that these individuals benefit from the health services without any discrimination, and their demands are met on time through receiving responsive services.

Conclusion

Evaluation of the minimum and maximum scores of parent satisfaction among the mothers participating in the current study indicated that the level of parent satisfaction with medical services at the NICU was above the international average. However, the mean scores of satisfaction obtained in different subscales of PedsQL in our research proved to be lower compared to similar studies in Turkey. According to the results of this study, mean of total parent satisfaction was affected by factors such as maternal education level. Moreover, employment status of parents had a significant effect on the mean scores of different subscales of satisfaction, including family participation and technical skills. Furthermore, mean scores of parent satisfaction in two subscales of emotional support and information were significantly affected by the social security insurance of mothers. However, no statistically significant correlation was observed between the level of satisfaction and maternal age.

In the provision of care for infants and children, healthcare professionals need to pay attention to different parameters, such as information, communication, empathy, emotional support, and participation of the family in the process of diagnosis and treatment. The emotional support provided by healthcare personnel can help parents in expressing their feelings and coping with critical conditions more effectively.

In conclusion, it is recommended that healthcare professionals in critical care units receive training on developing the required skills in order to increase the quality of care by gaining the satisfaction of the patients and their relatives. Furthermore, it is suggested that future studies be conducted as to examine the effect of other sociodemographic characteristics of parents on the level of satisfaction with medical services. This will ultimately lead to the improved quality of care in different sections of the healthcare system.

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