Mothers’ Satisfaction with Hospital Care in Children

Reza Haj Esfandiari and Ali Arjmand Shabestari*

Department of Pediatrics, Amir-Kabir Hospital’s Clinical Research Center, Arak University of Medical Sciences, Arak, Iran

Abstract

Introduction: Patient satisfaction has been considered as a reliable tool for assessing the quality of care performed in recent decades. In the health care system, parents are considered as supporter of the children; therefore, they represent the patient’s views. The aim of this study was to determine the satisfaction of mothers of hospitalized children in the pediatric ward. Materials and Methods: This cross-sectional descriptive study was performed using a Children’s Family Satisfaction Questionnaire (FSQ) by which 600 mothers were interviewed in different pediatric wards of Amir Kabir Hospital in Arak in 2015. Data were analyzed using SPSS software and descriptive statistics. Results: The mean age of mothers was determined as 29.45 and the mean age of children was 3.14. In the area of medical care, nursing and welfare services, the most satisfaction was related to “treatment and focus”, “measures management to reduce the patient’s fever” and “easy admission” and the lowest satisfaction was found to be related to “full response to parenting questions”, “answers to questions about the patient’s situation in plain language”, “The quality of food” and “the proper environment for children’s play.” Overall, the degree of satisfaction in terms of nursing and medical care was “good” to “fairly good”, while it was found to be “fairly good” to “moderate” for welfare services. Also, there was a significant relationship between satisfaction with the child’s sex, mother’s occupation, place of residence, parents’ education, the reason for the current hospitalization, the reason for the previous hospitalization and also the type of child insurance (p <0.05). Conclusion: This study showed that nurses and physicians should have open and effective communication with patients in order to satisfy the mothers and improve the quality of care of the patient, in addition medical staff should adapt their actions to the wishes of the parents. Post-discharge education about treatment and care interventions should be provided more than before. Additionally, Measures should also be taken to increase welfare services for children.

Keywords: Hospital care; Children; Family satisfaction questionnaire

Introduction

Hospitalization is stressful for the child and the parents. Uncertain outcomes, frequent hospitalization, special treatments, and the observation of the child’s pain and fear increase family stress and affect their performance. Patient satisfaction, called consumer satisfaction, has been considered as a reliable and valid tool for assessing the quality of medical care in the last decade, which is also true for child patients. Given their childhood status, their parents are considered as consumers of health care. Parents support the child in the health care system and thus represent the views of the patients.

Satisfaction is the judgment of the recipient of medical care about the amount of expectations. In other words, no care can be of high quality unless the patient is satisfied and the patient’s satisfaction leads to more effective collaboration and more consistent with the treatment and, as a result, it is more likely to be used again. If be necessary. Assessing patient satisfaction can improve the quality of care, since it provides important information that can be used to improve management plans and identify employee performance. In addition, appropriate communication and counseling patterns can be achieved by determining patient satisfaction. In order to interpret the quality of care, we need to understand the extent of acceptance and expectations of patients. Hospital healthcare groups including physicians, nurses and welfare services can promote patient satisfaction. As a result, the quality of patient care increases and the patient’s recovery process can be accelerated.
Methods
This descriptive cross-sectional study was performed on 600 children admitted in different parts of the pediatric ward of Amir Kabir hospital in 2015 for 6 months. The study population was mothers of admitted children and the study was performed at the time of discharge of children. Sampling was performed using simple random sampling based on inclusion and exclusion criteria.

Inclusion criteria
- Children admitted to different parts of the pediatric ward of Amir Kabir hospital in Arak who have been hospitalized for at least 2 days.
- Children who were accompanied by their mothers on most days of admission.
- Getting informed consent to participate in the study

Exclusion criteria
- Children admitted to different parts of the pediatric ward of Amir Kabir hospital in Arak who have been admitted for less than 2 days.

After entering the children, a checklist for demographic and clinical data and a Pediatric Family Satisfaction Questionnaire (PFSQ) with the help of the child’s mother was completed and field information was collected. A checklist for demographic and clinical information included the age of the child, sex, age of mother, mother’s occupation (employed, housekeeper), place of residence (town or village), mother’s education level (high school education, diploma, bachelor’s, master’s and doctor’s degree), childhood admission in the past (with cause), duration of admission to the child in the same visit (day), the type of underlying illness that caused the child to be admitted, the admission time (morning, evening, night), type of insurance (base: social security insurance, health insurance, armed forces insurance, Imam Khomeini Relief Foundation, Supplementary insurance).

The PFSQ questionnaire consisted of three parts of the medical care (9 items), nursing care (11 items) and welfare services (8 items). Furthermore, each item was measured by Likert scale as a good grade (score 5), fairly good (score 4), average (score 3), relatively weak (score 2) and poor (score 1). In total, the maximum score in welfare services was 80, in nursing care (score: 55) and in medical care (score: 45). The reliability and validity of the Persian form of this questionnaire have been studied by Pourmohammad et al. [9] and Hosseinian et al. [10] Based on their results, Cronbach’s alpha coefficient in both studies was 0.92. Therefore, the validity and reliability of the Persian form of the PFSQ questionnaire have been approved. [9,10]

Data analysis
After collecting data and based on the research objectives, statistical analysis was performed using SPSS version 24 software. Descriptive statistics were used to determine the relative frequency and mean score of mothers’ satisfaction, and inferential statistics (ANOVA) for determining the relationship of maternal satisfaction with demographic and clinical variables.

Ethical considerations
The research team adhered to the principles of medical ethics announced by the Ministry of Health, the Helsinki Declaration and the approval of the Medical Ethics Committee of Arak University of Medical Sciences; therefore, the patients were fully informed and unanimously participated in the study. The patient’s data remained completely confidential. Additionally, participants in the study could leave the study by their discretion.

Results
This descriptive cross-sectional study was conducted on 600 children admitted to different parts of the pediatric ward of Amir Kabir hospital in 2015. Of these, 260 were boys (43.3%) and 340 girls (56.7%). The mean and standard deviation of the females were 3.39 ± 2.13 and 2.95 ± 1.92, respectively, and the mean age of the children was determined as 3.14.

The mean and standard deviation of the PFSQ questionnaire score in terms of gender in the children participating in the design were reported to be 4.22 ± 0.65 in boys and 4.03 ± 0.86 in girls, respectively. T-test showed a significant statistical difference between them in terms of gender, and the average satisfaction of mothers in male patients was found to be higher than girls (p=0.001).

The average age of mothers was 29.49 years and most mothers were in the age group of 25-29 years. The relationship between maternal age and mean scores of PFSQ questionnaire was assessed using Pearson Correlation Test. There was no significant relationship between maternal age and their satisfaction with care and services (p> 0.05).

The mean and standard deviation of PFSQ questionnaire score according to the mother’s occupation of children participating in the design were 3.38 ± 0.98 for employed mothers and 4.19 ± 0.71 for housewives, respectively, which showed a significant difference in satisfaction in terms of status of employment. Where satisfaction was higher in housewife mothers (P=0.001). The frequency of children with housewife mothers was also higher (89.83%).

The mean and standard deviation of the PFSQ questionnaire score was 4.10 ± 0.79 in father with clerk job and 4.31 ± 0.62 in unemployed fathers, according to the father’s occupation of the children participating in the project. The t-test showed that there was a significant difference in terms of satisfaction with fathers employment status (P=0.666).

Based on the mean and standard deviation of the PFSQ questionnaire score, the mean score of the children living in the city was 4.03 ± 0.85 and the mean score was determined as 4.34 ± 0.47 for the children living in the village, which had a significant difference in satisfaction with the status of residence and satisfaction was higher in children living in rural areas (P=0.001).

The mean and standard deviation of the PFSQ questionnaire score for mother education levels were determined as 4.18 ± 0.74 for the group of high school education, 4.32 ± 0.58 for the diploma group, 3.0 ± 67.87 for the bachelor’s degree and 2.71 ± 0.65 for the group with master’s degree. There was a
significant difference in the level of satisfaction in terms of the mother’s education and the highest level of satisfaction was found in mothers with high school graduation (p=0.001). The highest frequency of mothers’ education was related to the diploma level (53.16%). Moreover, the mean and standard deviation of PFSQ questionnaire score according to the fathers’ education of the children participating in the project were found to be as 4.30 ± 0.48 for the group of high school education, 4.0 ± 29.72 for the diploma group, 4.03 ± 0.78 for the bachelor’s degree, 2.88 ± 0.94 for the group with master’s degree and 30.32 ± 29.72 for the group with doctoral degree. There was a statistically significant difference in the level of satisfaction with the father’s education; the highest satisfaction was found among the fathers with the high school education and the lowest satisfaction was found in fathers with master’s degree (P=0.001).

The mean and standard deviation of PFSQ questionnaire score according to the hospitalization record in the participating children were recorded as 4.17 ± 0.75 in children with a history of admission and 4.07 ± 0.80 in non-hospitalized children, respectively, a significant difference was found in the level of satisfaction of their children with the history of hospitalization (P=0.134).

For the reason of previous hospitalization, the mean and standard deviation of PFSQ questionnaire score in children with a history of hospitalization due to Gastroenteritis (GE) was 2.0 ± 76.86, followed by the causes of Upper Respiratory Infection (URI) (4.0 ± 17.58), pneumonia (4.28 ± 0.28) the cause of icterus (3.35 ± 0.98), other infections (4.0 ± 50.02), causes of hematology and oncology (4.0 ± 11.21) and other causes (4.80 ± 0.01). ANOVA test showed no significant difference between admission shift in the night shift (4.9 ± 0.76). The ANOVA test showed no statistically significant difference in terms of the hospitalization record in the participating children were recorded as 4.17 ± 0.75 in children with a history of admission and 4.07 ± 0.80 in non-hospitalized children, respectively, a significant difference was found in the level of satisfaction of their children with the history of hospitalization (P=0.134).

Based data presented in Table 3, the highest rate of admission was found in mothers with high school graduation (p=0.001). Additionally, the highest family satisfaction belonged to this group, followed by infections except for respiratory infections and GE. According to Table 1, the most common causes of hospitalization in Amir Kabir Hospital were URI and GE (24.66% and 22% respectively). ANOVA test showed that there was a statistically significant difference in the reasons of hospitalization and the level of satisfaction of their families with care and services (P=0.001); in addition, the highest satisfaction was with families that their child was admitted for a cause other than the diseases mentioned in Table 2; the mean score of the PFSQ questionnaire was 4.64 in this group, followed by a pneumonia (with an average score of 4.50) and hematology and oncology (with a mean score of 4.49). The lowest satisfaction rate was due to URI with the average score of 3.77.

According to the data, the mean duration of hospitalization was 2.78 days, most of them (46.83%) were admitted to the hospital for 2 days. The relationship between the length of hospitalization in the hospital and the mean score of the questionnaire PFSQ was measured using Pearson correlation test, which showed no significant relationship between length of hospitalization and satisfaction of families with care and services (p> 0.05).

Based data presented in Table 3, the highest rate of admission in the evening shift (48.5%) was observed. The mean and standard deviation of PFSQ questionnaire score according to the admission rate of children participating in the plan were: 4.0 ± 05.86 in the morning shift, 4.9 ± 0.76 in the morning shift and 4.23 ± 0.70 in the night shift. ANOVA test showed no statistically significant difference between admission shift in

Table 1: Mean and standard deviation of PFSQ questionnaire score due to previous hospitalization in children.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Number</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastroenteritis</td>
<td>31</td>
<td>5.16</td>
<td>2.76</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>Upper respiratory infections</td>
<td>19</td>
<td>3.16</td>
<td>4.17</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>Pneumonia</td>
<td>32</td>
<td>5.33</td>
<td>4.28</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td>21</td>
<td>3.50</td>
<td>3.35</td>
<td>0.98</td>
<td></td>
</tr>
<tr>
<td>Other infections</td>
<td>28</td>
<td>4.66</td>
<td>4.50</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Hematological and Oncology</td>
<td>59</td>
<td>10.00</td>
<td>4.52</td>
<td>0.27</td>
<td>0.001</td>
</tr>
<tr>
<td>Neurorlogical problems</td>
<td>42</td>
<td>6.70</td>
<td>4.48</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>Chronic Diseases</td>
<td>28</td>
<td>9.83</td>
<td>4.11</td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>19</td>
<td>3.16</td>
<td>4.80</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>No previous hospitalization</td>
<td>321</td>
<td>53.50</td>
<td>4.07</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>600</td>
<td>100</td>
<td>4.11</td>
<td>0.78</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Mean and standard deviation of PFSQ questionnaire score regarding the current cause of admission.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Number</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastroenteritis</td>
<td>132</td>
<td>22.00</td>
<td>4.07</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Upper respiratory infections</td>
<td>148</td>
<td>24.66</td>
<td>3.77</td>
<td>0.96</td>
<td></td>
</tr>
<tr>
<td>Pneumonia</td>
<td>51</td>
<td>8.50</td>
<td>4.50</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td>79</td>
<td>13.16</td>
<td>4.14</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>Other infections</td>
<td>40</td>
<td>6.66</td>
<td>4.20</td>
<td>0.74</td>
<td>0.001</td>
</tr>
<tr>
<td>Hematological and Oncology</td>
<td>52</td>
<td>8.66</td>
<td>4.49</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>Neurorlogical problems</td>
<td>68</td>
<td>11.33</td>
<td>4.18</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Chronic Diseases</td>
<td>9</td>
<td>1.50</td>
<td>4.32</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>3.50</td>
<td>4.64</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>600</td>
<td>100</td>
<td>4.11</td>
<td>0.78</td>
<td></td>
</tr>
</tbody>
</table>
were completely dissatisfied with welfare services. In addition, 60.3% of mothers were fully satisfied with nursing care and 2.6% of mothers were completely dissatisfied with nursing care. Furthermore, on average, 32.7% of mothers were satisfied with medical care and 2.9% of mothers were completely dissatisfied with medical care.

In terms of mean and standard deviation of medical care score, the highest satisfaction was related to “therapeutic measures and focus of physicians” with a mean score of 4.6 and the lowest satisfaction was associated with “answers to parent questions” with an average score of 3.98 [Table 4].

Overall, in the medical care, the mean score of the PFSQ questionnaire was 4.27, which based on the Likert scale, satisfaction in this aspect was “fairly good” to “good”.

In terms of mean and standard deviation of nursing care score, the highest satisfaction was related to “measures management to reduce the patient’s fever”, “venipuncture” and “treatment and medication care” with an average score of 4.50, 4.43 and 4.50.

In terms of average and standard deviation of nursing service scores, the highest satisfaction was related to “comfortably accepting the process”, with an average score of 4.60.

The lowest satisfaction was related to the quality of sectional food with an average score of 2.93. In general, in the welfare services, the mean score of the PFSQ questionnaire was determined as 3.62. According to Likert scale, satisfaction in this regard was “moderate” to “fairly good”.

In average, 58.7% of mothers were fully satisfied with medical care and 2.9% of mothers were completely dissatisfied with medical care.

In addition, 60.3% of mothers were fully satisfied with nursing care and 2.6% of mothers were completely dissatisfied with nursing care. Furthermore, on average, 32.7% of mothers were fully satisfied with welfare services and 10.6% of mothers were completely dissatisfied with welfare services. In addition, our findings indicated that 50.6% of mothers were completely satisfied with overall conditions of admission, and 5.4% of mothers were completely dissatisfied with their children admission conditions.

**Discussion**

The hospital is an integral part of the medical and social organization that provides the public with full health care (prevention, treatment and rehabilitation). Moreover, it is also a training center for healthcare staff and sociobiological research. Hospitals offer a variety of services to many people. Many of these services can lead to survival or death of patients. In order to ensure the quality of health care services, observance of medical ethics standards and respect for patients’ rights in the provision of health services are inevitable. [8] Therefore, the current study was aimed to measure the satisfaction of mothers of hospitalized children in the pediatric ward. In this study, 58.7% of mothers had complete satisfaction with medical care. A study indicated the rate of satisfaction as 37% in Shahid Beheshti Hospital of Kashan. [9] In a survey, mothers’ satisfaction with medical care has been reported to be good. [9] In the present study, “therapeutic measures and focus of physicians” (71.7%) had the highest level of parental satisfaction in the field of medical care. A study by Pourmovahed, indicated that the most appropriate and intimate relationship is the highest percentage of Good evaluation (72%) in the field of medical care.

The remarkable point in this study is that most mothers had the least satisfaction with medical care in terms of “responding to parenting questions” and “full explanations to parents”. In the dimension of nursing care, the “answers to the parent’s questions” and “description of the patient’s condition and care in simple language” earn the lowest score as compared to other
aspects. In the study of hosseinian and Pormovahed, most mothers also assessed the information on post-discharge care and treatment measures as moderate to poor.\cite{9,10,11} Schaffer et al. reported in a study that parents were demanding that they know about their child’s condition (advancement in treatment, clinical test, and treatments).\cite{12}

Ygge and Arnetz have also emphasized on this.\cite{13} In fact, paying attention to the needs of patients and parents for what they want to know increases their satisfaction with hospital services.\cite{9} Therefore, the importance of patient education should be taken into consideration; because training increases the patient’s satisfaction by reducing anxiety and fears about disease and therapies.

However, educating the patient by improving the knowledge and ability of self-care for patients in all nursing environments is associated with lower cost of care and treatment, health promotion and lowering of complications and reduction of hospitalization time.\cite{10}

In the term of nursing care, 60.3% of mothers expressed their complete satisfaction that “measures necessary to reduce the patient’s fever”, “venipuncture “ and “ care associated with treatment and medication “ respectively with a satisfaction showed the highest percentage as “good” evaluation (75%, 70% and 66.7%, respectively). In a study by Hosseinian, the highest percentage of satisfaction (85%) was from timely care in relation to the treatment and medication, as well as with respect to the behavior of the child. Pormovaheh has shown that mothers’ satisfaction with nursing care has been relatively good, and the “calm and respectful behavior” has the highest percentage.\cite{9,10}

In a study, two important factors were considered as the main criteria for parents’ satisfaction, including nursing and medical care (5), which was similar to those of Knafi and Terry.\cite{14,15} Davis emphasizes that a lack of a relaxed environment and a lack of respect for patient privacy can lead to dissatisfaction.\cite{16}

In the present study, the calm and respectful behavior of nurses with children has a mean score of 4.35 and a good and fairly good satisfaction of 80%, indicating that nurses have greatly understood the proper relationship with the patient and his or her family.

The results of this study indicated that 32.7% of mothers were satisfied with hospital welfare services, and 17.1% of them considered welfare services weak or relatively weak. In Hosseinian’s research, a high percentage of mothers (37.8%) were completely dissatisfied with hospital welfare services. In the welfare survey, the “quality of food in the sector” with a mean score of 2.93 in the PFSQ questionnaire and the percentage of satisfaction rate (16.7%) resulted in the lowest satisfaction of mothers.\cite{10}

The second reason for the lack of satisfaction of mothers in welfare services was the “availability of suitable space for playing in the ward” with a mean score of 15.3 in the PFSQ questionnaire and a percentage of satisfaction rate of 18.3%, which these should be taken into account in future hospital measures. In the study of Pormovahed and Hosseinian, the same as in the present study, the least satisfaction was about “providing a suitable space for playing in the ward”.\cite{10,11}

The welfare services of the hospital are of paramount importance in satisfying the parents. In Shaffer et al. found that four things are important for parents, including physical environment, effective communication, respect, and care. They stated that the safety and comfort of the hospital environment, including cleansing, proper space, good food and physical comfort, had a significant effect on them and the child.\cite{12} Demir and Celik in Turkey showed that four factors for physician services and nursing, medical and nutrition services are important to ensure patient satisfaction with the treatment process.\cite{17} Considering the lack of satisfaction of mothers with the quality of food in the present study, a solution should be considered to address this need.

In the present study, the “proper implementation of the admission process” with a mean score of 4.6 in the PFSQ questionnaire and 70% satisfaction, revealed the highest level of satisfaction of parents in welfare services, which was different from the study of Pormovahed, where he suggested that the appropriateness of staffing with each other has the highest percentage of good evaluation (74.5%) in terms of welfare services. It is important that wards staffs can take action in order to meet the needs of the patient and his or her family, and may also cover many of the shortcomings and welfare problems.

Marino et al. also reported that nurses’ cooperation is an important factor in satisfying parents in general. One of the things that need to be improved in the area of nursing skills seems to be a collaborative effort. In broader terms, it can be argued that group collaboration should be conducted on a regular basis between nurses, doctors, and service staff.\cite{17} In addition, our findings showed that variables such as child sex, employment status of mother, place of residence, parents education and the reason for the current hospitalization, the reason for previous admissions in children with a history of admission, and the type of insurance had an effect on the level of parents’ satisfaction, where the mean score of PFSQ questionnaire was higher in boys’ parents compared to girls. In addition, average score in housewife mothers showed an increase as compared with working mothers and the families living in the village had a higher average score than urban residents. Additionally, more satisfaction has been gained in mothers with diplomas, fathers with a high school education, and in families whose children have had a history of hospitalization due to hematology and oncology problems, as compared to other groups.

In these groups, the least satisfaction was related to parents with a master’s degree and children with a history of hospitalization due to gastroenteritis. Pormovahed in his study indicated that the satisfaction of mothers in the group with higher education level merely reduced welfare services compared to other groups (P=0.04), which is consistent with the present study. This can indicate that higher level of education, knowledge, expectations of parents can be associated with reduced their satisfaction from welfare services. Hosseinian also found a significant relationship between the satisfaction of mothers with the type of child illness, and it seems that the mothers of children with acute illness are more likely to have lower expectations than the mothers of children with chronic disease due to more attention.\cite{9}
Schaffer and colleagues also state that the type of diagnosis, the age of children, the type of service, and the acute or chronic nature of the disease do not affect the parents’ satisfaction with care system. [12]

**Conclusion**

This research and other studies conducted in this field suggest that physicians and nurses have an effective relationship with parents, in order to satisfy their mothers and improve the quality of childcare, where medical staffs should meet the required information with the wishes of the patients. Also, pre-discharge training and explanation of care measures should be taken into account. The results of our study indicate that improving the level of service quality is associated with increased satisfaction of mothers. Developing and implementing a communication and caring skills training program for the healthcare providers is considered as a step for improving the health of the community in addition to treatment of patients.

**Conflict of Interest**

The authors disclose that they have no conflicts of interest.

**References**