Research Article

Assessment of Parental Satisfaction with Day-Care Surgical Services in a Tertiary Level Pediatric Hospital

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Abstract

Background: Parental feedback is important for improving quality of the surgical services provided.

Objective: This study was conducted to assess the level of satisfaction of parents with the day-care surgical services so as to find out where improvement is needed.

Methods: This was an observational cross sectional study conducted in the Department of Pediatric Surgery, National Institute of Child Health, Jinnah Sindh Medical University Karachi from September 2019 to April 2020. The parents of the children who underwent different day-care surgical procedures were included. A validated Parent Satisfaction Scale (PSS) which consist of 11-items was used. The responses were made according to Likert scale. Three groups of satisfied, undecided and unsatisfied study participants were made according to the scores obtained. The socio-demographic variables including age of parents and children, level of education, and income group were compared amongst study groups.

Results: Total of 114 parents participated. The most common procedure performed was inguinal herniotomy (n=59). Seven (6%) patients were brought back after discharge due to pain. Eighty-seven (76.30%) parents were satisfied with the services provided while 18 (15.8%) were unsatisfied and 9 (7.9%) undecided. A significant difference in the satisfaction level of the study participants noted with respect to the mean age of parents ($p=0.039$), level of education ($p< 0.001$) and income groups ($p< 0.001$).

Conclusion: Majority of the study participants were satisfied with the surgical services provided. Lack of respect given by the hospital staff and delay in getting treatment were the main reasons for dissatisfaction. Socio-demographic characteristics of the study participants were significantly associated with the level of satisfaction.

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Key words: Parental satisfaction, day-care surgery, child, parent satisfaction scale.

Introduction:

Parental satisfaction is an important determinant of quality of care provided to their children in hospitals. This helps in identifying areas that needs improvement[1]. For this reason a feedback from parents is routinely obtained in many clinical set ups. Studies in relation to services rendered in intensive care, and different surgical disciplines have been reported[2,3]. For assessing satisfaction level different tools have been developed and their reliability and validity studies performed[4]. For any such assessment the level of understanding of parents and their compliance with the instructions provided also plays an important role. Thus, different items are used in study tools.

With improved understanding and safety demonstration with different anesthesia drugs number of surgical procedures in pediatric population are now performed on day-care basis[5]. The acceptance of this protocol has increased over the years especially in advanced countries with well-organized healthcare system including

effective communication and provision of ambulance services in emergency for transfer of patients. However, there are still perceived challenges in following similar protocols in many set ups where healthcare services are still in primitive form. In addition, acceptance and compliance with the day-care surgery protocols by parents may be difficult[6]. This can be the perceived reasons of expressing dissatisfaction with the services provided at hospital. In addition, the attitude of the healthcare providers in a busy hospital may add to the anxiety.

In order to assess the satisfaction of parents with the quality of surgical services provided especially in a day-care set up few studies are found.[5] It is therefore important to conduct studies on this subject so as to improve these services. Different tools for assessment of satisfaction are described in literature. It was noted that the hospital staff interaction with the parents is the most important determinant of parental satisfaction. The care that is provided during hospital stay is another important factor for satisfaction[7]. The Parent Satisfaction Scale (PSS) is found in literature to assess the parental satisfaction[8]. This tool was validated in Malaysia and its version PSS-M was found appropriate[9]. This tool is freely available and used in this study as there are similarities between cultural and social values and services among two countries.

Methods:

This was an observational cross sectional study conducted in the Department of Pediatric Surgery, National Institute of Child Health, Jinnah Sindh Medical University Karachi from September 2019 to April 2020. A sample size of 114 was obtained through WHO sample size calculator with a 95% confidence level and 4% of relative precision (p). Institutional review board approval was obtained. Informed consent was taken from study participants after explaining the purpose of the study.

Day-care surgery is defined as a planned procedure where patient is admitted and discharged on same calendar day.[10] For this study we added made more objective criteria that included a surgical procedure which was completed within an hour (from induction of anesthesia to full recovery following surgery), not involving any body cavity, with not more than 10 ml blood loss during the operation. All children of 8 months to 12 year of age who fell into inclusion criteria were enrolled. They were investigated on outpatient basis and anesthesia fitness obtained. Children with associated anomalies and diseases of cardiovascular, respiratory, neurological, musculoskeletal system, metabolic disorders, and nutritional compromise were excluded. Parents were given instructions about preoperative preparations including when to stop oral intake. They were admitted to day-care unit at scheduled time and operated. Postoperatively after recovery children were kept for monitoring in day-care unit. Pain medications were provided during induction of anesthesia, at surgery, and infiltration of surgical wound with lignocaine was done where applicable at closure of the incision. In postoperative period paracetamol suppository was used for pain relief. Antibiotics were used as per hospital protocol at induction. The surgical procedures performed included inguinal herniotomy (n=59), orchiopexy (n=34), ligation of patent processus vaginalis for hydrocele (n=7), rectal polypectomy (n=5), excision of cyst like angular dermoid (n=5) and release of ankyloglossia inferior (n=4). Patients were discharged after they became fully conscious and tolerated clear fluids. Patients were prescribed paracetamol syrup for five days. Follow up was scheduled after two weeks in outpatient clinic. Parents were given advice and telephone number of a member of surgical team on-call provided to make contact if any issue or problem arose. Instructions were also given about surgical wound care, feeding and hygiene practices.

For measurement of satisfaction PSS-M tool was used. This scale has eleven items in the form of statements. This is a uni-dimensional scale. The aspects of satisfaction relate mostly to the interactions made with the hospital staff. The responses are in 5-point Likert scale from strongly disagree to strongly agree. The scale provides information about specific aspect of care provided by healthcare workers. It has simple English words without any medical terminology. For those who could not read the questionnaire, an Urdu translation was made by experts. The questionnaire was given to the parents who could read, understood and marked the responses. It was read out to those study participants who were illiterate. This was done at first follow-up in outpatient clinic in a separate room. All the study

participants were the mothers who remained with the child throughout the course of treatment from initial visit to outpatient, during hospital stay and in postoperative follow-up. The scores were assigned as zero to "strongly disagree" and 4 to "strongly agree". Maximum score that can be achieved was 44. Scores between 0-11 were considered as unsatisfied, 12-22 as undecided and 23 -44 as satisfied.

Data were analyzed by using SPSS version 22. Frequencies with percentages were calculated for each item. Scores were reported as mean ±SD. The three groups based upon the level of satisfaction were compared with respect to the mean age of the study participants and patients, education level and monthly income. One-way analysis of variance (ANOVA) was used to compare the mean age of the study participants and patients. Post-hoc Tukey HSD test was done to evaluate pairwise differences in mean age amongst the groups. Educational level and monthly income were compared using Chi square test. A $p<0.05$ was considered as significant in all comparisons.

Results:

A total of 114 mothers were interviewed. The mean age of the children operated was 44.36±25.02 months, median 36 months with range of 112. There were 86 (75.40%) male and 28 (24.60%) female patients. Only seven (6%) patients were brought back to hospital in the same evening due to pain. Parents of these children were anxious and after counseling admitted for overnight observation. In follow up period no wound infection was observed.

Table 1: *Responses of study participants on parents satisfaction scale (PSS)*

No	Items	Mean Score n (SD)	Responses on Likert Scale 0 (Strongly disagree)	1 (Disagree)	2 (Neither agree or disagree)	3 (Agree)	4 (Strongly agree)
1	Overall, I was satisfied with staff	3.5± 0.6	-	-	9 (7.9%)	33 (28.9%)	72 (63.2%)
2	I was satisfied with the availability of the staff	3.6± 0.5	-	-	6 (5.3%)	24 (21.1%)	84 (73.7%)
3	I was satisfied with the way the staff helped me understand my child's problems	3.6± 0.5	-	-	8 (7.0%)	20 (17.5%)	86 (75.4%
4	I was satisfied with the convenience of appointments with the staff	2.3± 0.7	-	16 (14.0%)	48 (42.1%)	43 (37.7%)	7 (6.1%)
5	I was satisfied with the caring and concern the staff showed for my child	3.6±0.5	-	-	3 (2.6%)	33 (28.9%)	78 (68.4%)
6	I was satisfied with how the staff treated me with respect	3.0±1.1	-	19 (16.7%)	11 (9.6%)	26 (22.8%)	58 (50.9%)
7	I was satisfied with how the staff listened to what I had to say	3.5±0.7	-	-	17 (14.9%)	17 (14.9%)	80 (70.2%)
8	I was satisfied with how the staff kept me informed about changes in the care of my child	3.4±0.7	-	-	15 (13.2%)	29 (25.4%)	70 (61.4%)
9	I was satisfied with how the staff helped me find the services my child needed	3.4±0.7	-	-	19 (16.7%)	22 (19.3%)	73 (64.0%)
10	I was satisfied with how the staff included me in the decision making about child's treatment	3.4± 0.7	-	-	16 (14.0%)	30 (26.3%)	68 (59.6%)
11	I was satisfied with the support I received from the staff	3.4± 0.7	-	-	14 (12.3%)	27 (23.7%)	73 (64.0%)

The responses of study participants are given (Table 1). None of the participants strongly disagree to any of the items of the scale. The analysis of PSS responses showed that overall 87 (76.30%) mothers were satisfied with the services provided at hospital for day-care surgeries. On further analysis out of 87 satisfied parents, 67 (77.02%) were contended with the care provided at the hospital however 20 (22.98%) subjects had some reservations related to the behavior of the staff. The two important observations made by unsatisfied study participants were difficulty in getting appointment for surgery and perceived lack of respect given by hospital staff.

Table 2: *Socio- demographic data of study participants in different levels of satisfaction groups*

Variable	Satisfied group n = 87	Undecided group n = 9	Unsatisfied group n = 18	p value
Age of patient (Months) (Mean ± S.D)	44.4 ± 26.463	39.78 ± 19.117	46.3 ± 20.967	0.816
Age of mother (Years) (Mean ± S.D)	32.32 ± 8.447	28.67 ± 3.87	27.7 ± 3.926	0.039*
Education				
University level (n = 21)	9 (42.8%)	1 (4.8%)	11 (52.4%)	
High School level (n = 67)	57 (85.0%)	5 (7.5%)	5 (7.5%)	< 0.001*
Uneducated (n = 26)	21 (80.8%)	3 (11.5%)	2 (7.7%)	
Income group				
>Euro 265 (n = 28)	8 (28.6%)	8 (28.6%)	12 (42.8%)	
< Euro 265 (n = 86)	79 (91.9%)	1 (1.2%)	6 (6.9%)	< 0.001*

Significant *

The one-way analysis of variance (ANOVA) suggested that the mean age of the parents was significantly different with respect to satisfaction level (p=0.039). A statistically significant difference in education level (p< 0.001) and income groups (p < 0.001) was observed amongst the three groups based upon level of satisfaction using Chi square test. Post-hoc analysis using Tukey HSD test did not reveal significant difference between the pairs with respect to mean age of the parents (Table 2).

Discussion:

The results of this study showed that most of the study participants were satisfied with the services provided to their children from the first contact with the consultant in outpatient clinic till the follow up after completion of treatment. This is a reflection of quality of care provided at various levels during the interaction with health-care providers of different categories. However, few participants were not happy with the experience they had in hospital. During encounters with hospital staffs in a busy set up delays do occur in completing the tasks. Sometimes families have to wait for a long time to get investigations done and obtain anesthesia consult before surgery. Children usually get priority care in a general hospital in comparison with older patients however in a pediatric set up infants and toddlers are given priority. It is important for the families to understand the possible difficulties they might face during treatment at hospital. Parents' comprehension of information provided plays an important role as well[11].

Day-care surgeries were started to lessen the burden on hospital services and make room for patients in waiting[12]. This also helps families in spending more times with their children after surgery in their own environment. This improves bonding between family members and parents do not have to take leave from their workplace. This decreases financial burden on families as well. To some parents taking care of a child after surgery at home is frightening however proper counseling in preoperative period and information about what to expect in hospital and later at home can help in allaying anxiety and better prepare the parents for the care of children at home[13].

The valid reasons for the parents to get anxious in postoperative period included pain and feeding especially

of infants and toddlers. In day-care set up clear fluids are usually allowed up to two hours before operation and breast milk up to four hours. In postoperative feeding is usually allowed two hours after recovery from anesthesia. Pain in this study was managed with intraoperative non-narcotic analgesia and in postoperative period with paracetamol suppository. Early ambulation was also encouraged as a preparation step for discharge. In only seven (6%) patient's parents brought their child back to hospital due to pain which was managed with paracetamol and parental counseling.

The attitude of healthcare providers including doctors, nurses and paramedical staff is an important factor in ensuring best possible care for the patient and families. Usually it is the nursing staff that plays a key role. They work closely with parents and patients that help in decision making and providing care[14]. Presence of well trained and regular staff in day-care unit ensures continuity of same level of services. Same is practiced in our set up. Regular debriefing sessions with the hospital staff working in day-care unit helps in identifying gaps in services and how improvement can be made.

In the past, care to the pediatric patients were provided exclusively by the hospital staff. This practice gradually changed as presence of family with the child during hospitalization found helpful in addressing emotional, psychological and developmental consequences. However, many healthcare providers kept boundaries in their interactions with the parents[15]. This may result in perceived barriers and inhibition during communication for many decision making processes. In our study only 50% of study participants were fully satisfied with the respect provided to them at hospital. Family centered care is now an essential part of pediatric nursing philosophy of care[15]. This philosophy may be implemented in its true spirit by incorporating competencies related to family centered care in the nursing curriculum.

In our study it was noted that satisfied study participants had mean age of 32.32 ± 8.44 year which was significantly more than other groups (p=0.039). This reflects that more mature age group mothers were well adjusted with the hospital environment and in their interactions with healthcare providers. Another important observation was level of education and its relation to the satisfaction. Participants with higher qualification were relatively unsatisfied. This reflects that they expected more from the services rendered at hospital. Similar observation was related to the socioeconomic status. Higher the income group of study participants more was the level of dissatisfaction. It reflected that responses of the study participants were related to their level of expectations from the day-care services. Fielding et al from United Kingdom were of the opinion that level of satisfaction was dependent upon the demographic background of study participants as well[16]. In a study from Turkey the study participants were dissatisfied with the physical conditions of the hospital and most satisfied with the care provided by nursing staff.[18] It is therefore important to get regular feedback from the parents. The responses especially of unsatisfied group can identify the areas that need improvement. Our study thus provided further evidence based data on the subject.

Conclusion:

Majority of study participants rated the services provided at hospital for children admitted to the day-care surgery unit as satisfactory. However, many participants demanded more respect from the hospital staff and facilitation for early appointment for surgery. This feedback found important in improving quality of services at hospital.

Ethical Approval: Given

Conflict of Interest: The authors declare no conflict of interest.

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