



**PARENTAL SATISFACTION AND INVOLVEMENT CONCERNING  
CARE OF THEIR HOSPITALIZED CHILD.**

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## ABSTRACT

**Background:** Parents' satisfaction and involvement are vital for the judgment of healthcare interventions. Parents were satisfied by participating in their child's health, thereby enhancing adherence to the therapeutic regimen and understanding medical information. Parents' participation in their child's care is a new approach. An effective communication between parents and health professionals is vital for parent satisfaction and quality of care.

**Objective:** The aim of this study was to determine the level of parental satisfaction and involvement and its associated factors at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia.

**Methods:** Institution based cross-sectional study was conducted by using systematic random sampling technique. The data was collected through face to face interview using structured questionnaire. Bivariate and multiple logistic regressions were used to examine the association between independent and dependent variables.

**Results:** Two hundred twenty four parents were included in this study. The overall parental satisfaction of child's care was 59.8%. Pediatrics wards at which the child is hospitalized [AOR: 0.21; 95% CI (0.080, 0.0569)], parents' educational status [AOR: 0.22; 95% CI (0.073, 0.662)], parents' occupation [AOR: 3.45; 95% CI (1.116, 10.649)], duration of hospital stay [AOR: 4.75; 95% CI (1.84, 12.265)], adequacy of care [AOR: 7.35; 95% CI (2.779, 19.41)] and adequacy of pain management [AOR: 3.89; 95% CI (1.413, 10.692)] were found significant predictors of overall parental satisfaction ( $p < 0.05$ ).

**Conclusion:** This study revealed an average level of parental satisfaction concerning their child's care. Wards with better physical environment, short duration of hospital stay, provision of adequate care and adequate pain management were found to be the most important factors associated with parental satisfaction. It strongly suggested that there is a great need for establishment of clinical practices addressing those factors in order to optimize parental satisfaction concerning hospital care of ill children.

**Keywords:** parent, parental satisfaction, parental involvement, hospitalized child, child care

## INTRODUCTION

Studies revealed that parental satisfaction is considered as an essential component of quality care. Parental involvement and satisfaction are vital for child's care in the hospital setting that could enhance parents to understand the nature of their child's illness and adhere to their child's treatment plan [1-4].

Different reports showed that parental satisfaction regarding the care provided is important to improve the communication channels between pediatricians, nurses, other healthcare professionals and parents [5-8]. Knowledge, commitment, and the ability of parents are essential to maximize adherence and healthcare providers' relation with patient/ parents is important for effectively informing, motivating and strategizing with patients [9, 10].

Pieces of evidence showed that patient/ family-centered approach to healthcare delivery where there is a mutually beneficial partnership between patients and health professionals is widely advocated within healthcare literature [11, 12]. Scholars have also explained that parental participation should be considered in every dimension of their child's health care [3, 13, 14].

International health policy advocates that patient-centered care is embedded into health care delivery that patient-professional interactions are participatory and collaborative in nature [15]. However, to date parents found to be challenged to have harmony with health care providers as evidence showed that this might be due to fear of the health professionals [16]. Humanized care during hospitalization is linked with the ability to approach individuals holistically and equally, while non-humanized care is permeated by attitudes that value hospital rules, lack of attention, and lack of empathy by professionals [17]. Child well being does not only depend on physicians

and nurses but also parents should be responsible for the evaluation of the quality of their child's care [7]. Parents' active involvement in the clinical decision-making process and providing feedback is important to improve quality of care [18-20]. Often, maternal experience contributes toward making the health service more responsive to clients, which currently being emphasized by the World Health Organization (WHO)[ 21].

Despite this, evidence showed that many health services do not meet a minimum requirement for parents' satisfaction [22]. Because of communication barriers, parents became more dissatisfied with the care provided for their child [8]. Although pieces of evidence showed that parents were satisfied with their child's care in many parts of the world, there are no sufficient shreds of evidence in Ethiopia. Therefore, this study was aimed to investigate the level of parental satisfaction and involvement and its associated factors among hospitalized children at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia.

## **MATERIALS AND METHODS**

### ***Study design and setting***

An institutional based cross-sectional study was conducted among 224 parents of hospitalized children at the Tikure Anbesa Specialized Hospital, Addis Ababa, Ethiopia from March 2015 till April 2015. Addis Ababa is the capital city of Ethiopia and seat of the African Union and United Nations World Economic Commission for Africa. Tikure Anbesa Specialized Hospital has about 500 beds in medical, gynecological and obstetrics, surgical, pediatrics and emergency departments and facilitated with the outpatients' department and has also seven x-ray, nine surgical and two laboratory diagnostic rooms. The hospital has specialty units or referral clinics

(chest, renal, neurology, cardiology, dermatology, gastro intestine, infectious disease, orthopedics, and general surgical, gynecologic and obstetrics, diabetic, hematology, medical intensive care units (ICU) and surgical ICU units). In this hospital, the pediatric department provides service for about 8,885 inpatient cases per year with six units (a pediatric surgical ward, pediatric medical ward, pediatric oncology ward, pediatric emergency ward, pediatric intensive care unit and neonatal intensive care unit). An average of 471 pediatric cases per month gets service in all the pediatrics wards which have a total capacity of 183 beds.

### ***Study population***

All parents and/or guardians of admitted children in pediatric wards (units) during the data collection period were the study population.

### ***Eligibility criteria***

All parents and/or guardians who have hospitalized children that had a length of stay as an inpatient for at least 48 hours in the hospital were included in the study.

### ***Sampling methods and sampling procedure***

The sample size was determined by using a single population proportion formula considering the following assumptions: standard normal distribution with confidence interval (CI) of 95% ( $Z_{\alpha/2} = 1.96$ ), absolute precision or tolerable margin of error ( $d=0.05$ ), and the assumption that 50% of the parents were not satisfied with the health care provided in the hospital since there is no study conducted in Ethiopia. Assuming a 10% none responses rate the sample size was 423. Since the number of population ( $N=471$ ) during the study period were less than ten thousand, the

correction formula  $nf=n/(1+n/N)$  was used and reduced the number of samples to 233, where "nf" is final sample size, "n" stands for initial sample size and "N" denotes estimated total population during the study periods.

The total sample size was allocated proportionally to each wards of pediatrics. Based on this proportion, the study subjects were selected by using systematic random sampling technique at every K value interval using their bed numbers as a sampling frame among parents of hospitalized children, where a K value interval is ~2.

### ***Study variables and measurement***

Level of parents' satisfaction of hospitalized children was the outcome variable while parents' socio-demographic characteristics, duration of a hospital stay, histories of previous hospitalization, patient care, communication, hospital environment, parental participation and waiting times were the independent variables.

The data collection tool was a questionnaire adapted with careful modification from the first draft of English Version questionnaire about Parent Satisfaction Survey [23] and translated into Amharic Version by language experts and then translated back to English to check its consistency. The questionnaire is composed of 39 items, which are 36 Likert scale and three open-ended items with five dimensions (patient care, communication, participation on the decision of their child's care, hospital environment and waiting time) and nine sociodemographic items.

**Parental level of satisfaction** is classified into two categories which are satisfied and unsatisfied.

The cutoff points were calculated using the demarcation threshold formula:  $\{(total\ highest\ score - total\ lowest\ score)/2\} + Total\ lowest\ scores$  [24, 25].

Parental satisfaction was defined as fulfilling the parents' positive expectations of the perceived factors of the child's care, which was measured from each measuring items in the Likert scale.

The satisfaction level of each item was also determined using the score above the mean of each Likert scale. Overall parental satisfaction was calculated by summing all items measuring satisfaction and is determined the cutoff point using the demarcation threshold formula as indicated above.

The esthetic value of the **hospital environment** in which care was included noise level, cleanliness, neatness, privacy, and confidentiality and parents were classified as satisfied with hospital environment as they answered above the cut of a point which was supposed to measure the physical environment aspect.

**Patient care** includes medical care, nursing care, compassion and respectful, response time and recommendations and parents were considered to be satisfied as they scored above the cut of a point of the total value of each items measuring patient care using the demarcation threshold formula.

**Communication** between parent/child and the healthcare team were used to assess health care providers' teamwork, appropriate answering of questions and including parental concerns being identified and appropriately addressed. In addition, is used to inform parents of upcoming treatments and results in which the parents would be considered as satisfied with the total score

of each item above the cutoff point of total value items in the sub-scale from the given demarcation threshold formula.

The amount of time that parents and patients wasted in the hospital without getting health care service considered as *waiting time*. Parents are considered likely satisfied with waiting time when the total score of items for waiting time is above the cutoff point using the threshold demarcation formula.

### ***Data collection procedure***

Two data collectors were recruited and trained to administer the interview and one supervisor was also recruited and trained to monitor the data collection process.

### ***Data quality control***

The quality of data was ensured through amendment of the data collection tool according to the Ethiopian context. The tool was pre-tested before the actual data collection period and modifications were taken. Two data collectors and one supervisor were recruited and trained on how to interview and fill the questionnaire. The collected data was checked for completeness, accuracy, and consistency.

### ***Data processing and analysis***

Data was checked for completeness and cleaned before it was entered in to a computer. Then it was coded and entered into Epi-data version 3.1 and imported into SPSS version 21 packages for data analysis. Frequencies and proportions were used to describe the study participants. The data was presented by using tables and graphs.



Bivariate analysis and crude odds ratio with 95% confidence interval (CI) was used to see the association between the independent variables and the outcome variable by using binary logistic regression. Independent variables with P-value of  $\leq 0.25$  were included in the multivariate analysis to control confounding factors. Adjusted odds ratio along with 95% CI was estimated to identify the factor associated with parental satisfaction. Level of statistical significance was considered at P- value less than 0.05.

### ***Ethical consideration***

Ethical clearance was obtained from institutional ethical review board (IRB) of the Addis Ababa University, School of Nursing and Midwifery. Study participants were well informed about the purpose of the study, and data was collected after oral and written consent from each parent was obtained.

## **RESULT**

### ***Socio-demographic characteristics***

A total of 224 parents enrolled in the study through face-to-face interview making a response rate of 96.14%. Out of the total parents, 42 (18.8%), 38(16.5%), 42(18.8%), 96(43.3%) and 6(2.7%) were from medical, oncology, and surgical wards and neonatal ICU and pediatric ICU, respectively. Of the total parents, 160 (71.4%) were mothers. The mean age of the parents was 32(SD±8). Majority of parents 191(85.3%) were married. About 84(37.5%) parents had primary educational status and 137(61.2%) had no history of previous hospitalization while 98(43.8%) were admitted for more than two weeks (Table 1).

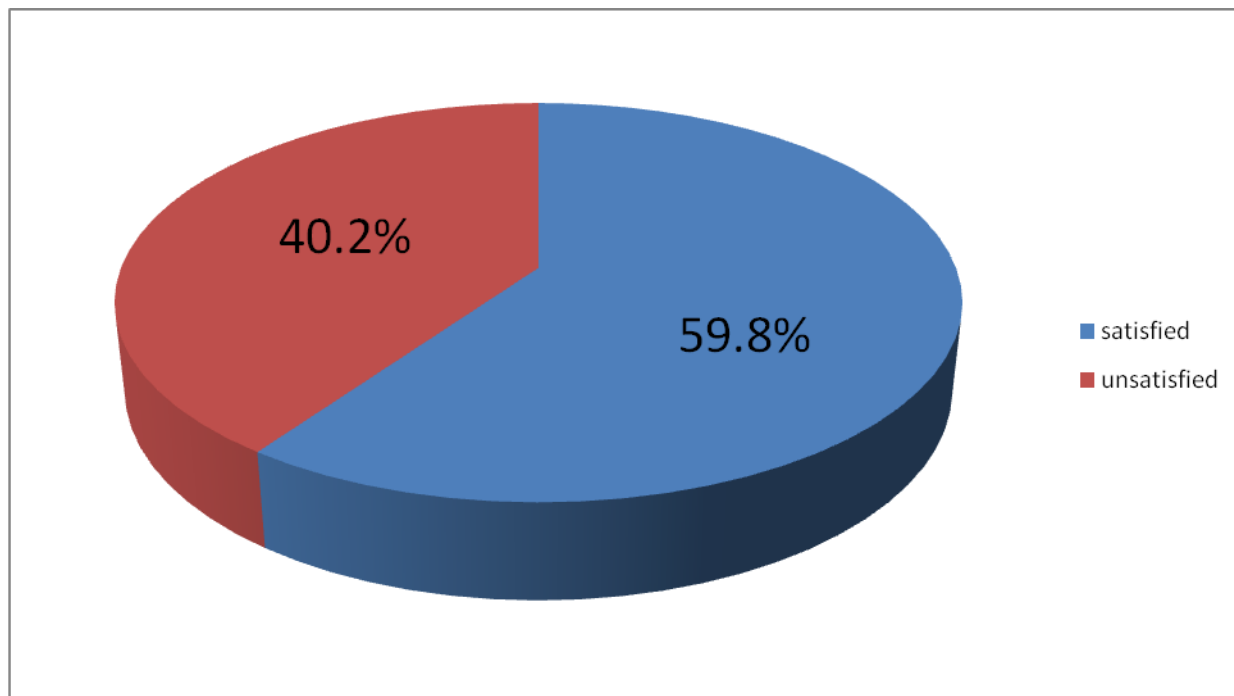
**Table 1:** Socio-demographic and visit characteristics of parents whose children are hospitalized in the Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia, 2015(n=224).

Variables	Number	Percent
<b>Sex</b>		
Female	160	71.4
Male	64	28.6
<b>Age(in years)</b>		
<20	10	4.5
20-29	76	33.9
30-39	93	41.5
40-49	32	14.3
50-59	11	4.9
60 and above	2	0.9
<b>Marital status</b>		
Single	20	8.9
Married	191	85.3
Divorced	5	2.2
Widowed	8	3.5
<b>Educational status</b>		
No formal education	50	22.3
Primary education	84	37.5
High school and above	80	35.7
<b>Ethnicity</b>		
Amhara	93	41.5
Oromo	15	6.7
Tigri	61	27.2
Guragie	50	22.3
Others	5*	2.2*
<b>Annual income(Birr)</b>		
Less than 12000	146	65.2
12000-24000	48	21.4
Greater than 24000	29	12.9
<b>Occupation</b>		
Governmental employee	16	7.1
Private	47	21.0
Merchant	26	11.6
Farmer	65	29.0
House wife	62	27.7
Others	8**	3.6**
<b>Frequency of previous hospitalization</b>		
None	137	61.2
Once	51	22.8
>1	36	16.1
<b>Duration of hospital stay</b>		
7 days and below	77	34.3
8-14 days	49	21.9
More than two weeks	98	43.8

\*=wolayita, kembata, \*\*=laborer, student, bête kihinet, no job

### *Level of parental satisfaction*

The overall satisfaction level of parents concerning their child's hospital care showed that majority 134 (59.8 %) parents were satisfied (Figure 1)



**Figure 1:** Level of parental satisfaction concerning their child's hospital care in the Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia, June 2015 (n=224).

### *Proportion of subscales satisfaction by ward types*

Parents of children in surgical and medical wards were less satisfied with the hospital environment, which was 35.7% and 38.1% respectively. In the medical ward, parents were less satisfied (40.5%) in the dimension of participation and involvement of their child's care. Parents were more satisfied in all dimensions (indices) of care in oncology, PICU, and NICU.

Concerning patient care, parents of children in the pediatric medical ward were less satisfied (57.1%) as compared to other wards (Table 2).

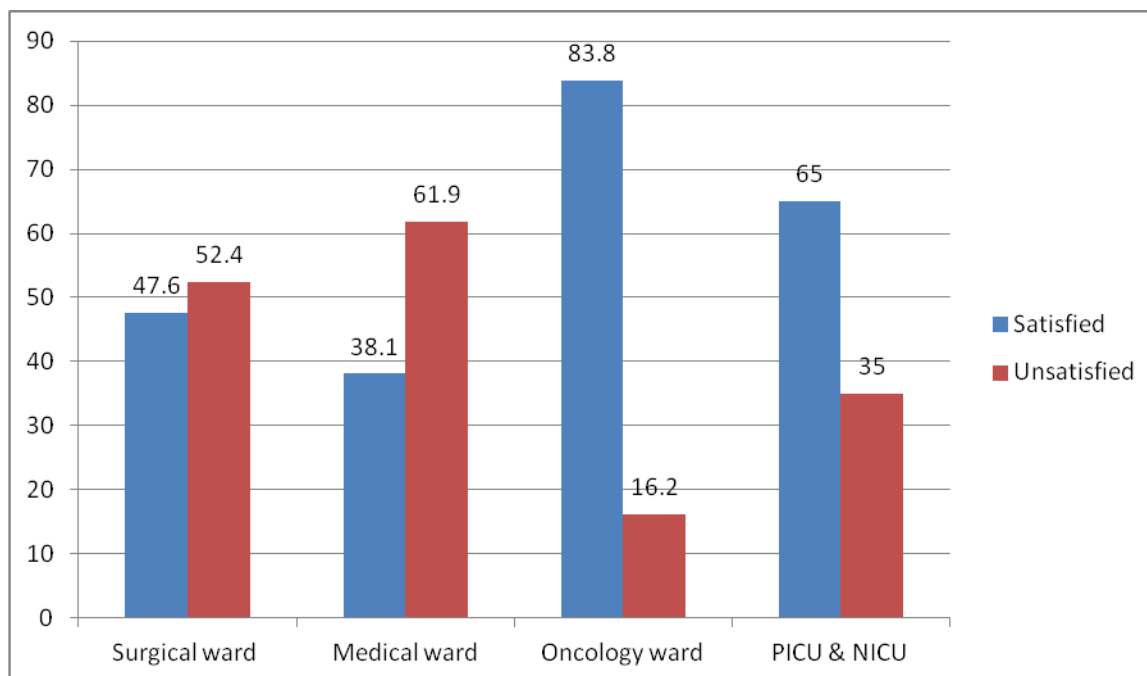
**Table 2:** Proportion of parental satisfaction by subscales (indices) and ward types in the Tikur Anbessa specialized hospital Addis Ababa, June, 2015 (n=224)

Wards	Patient care		Communication & Information		Hospital environment		Participation & Involvement		Waiting time	
	Satisfied N(%)	Unsatisfied N(%)	Satisfied N(%)	Unsatisfied N(%)	Satisfied N(%)	Unsatisfied N(%)	Satisfied N(%)	Unsatisfied N(%)	Satisfied N(%)	Unsatisfied N(%)
Surgical	26(61.9)	16(38.1)	25(59.5)	17(40.5)	15(35.7)	27(64.3)	26(61.9)	16(38.1)	27(64.3)	15(35.7)
Medical	24(57.1)	18(42.9)	25(59.5)	17(40.5)	16(38.1)	26(61.9)	17(40.5)	25(59.5)	27(64.3)	15(35.7)
Oncology	29(78.4)	8(21.6)	32(86.5)	5(13.5)	30(81.1)	7(18.9)	28(75.7)	9(24.3)	30(81.1)	7(18.9)
PICU	5(83.3)	1(16.7)	6(100)	0	6(100)	0	4(66.7)	2(33.3)	5(83.3)	1(16.7)
NICU	64(66)	33(34)	76(78.4)	21(21.6)	53(54.6)	44(45.4)	57(58.8)	40(41.2)	61(62.9)	36(37.1)

PICU=Pediatric intensive care unit NICU=Neonatal intensive care unit

***Proportion of overall parental satisfaction of quality of care in pediatrics wards (units)***

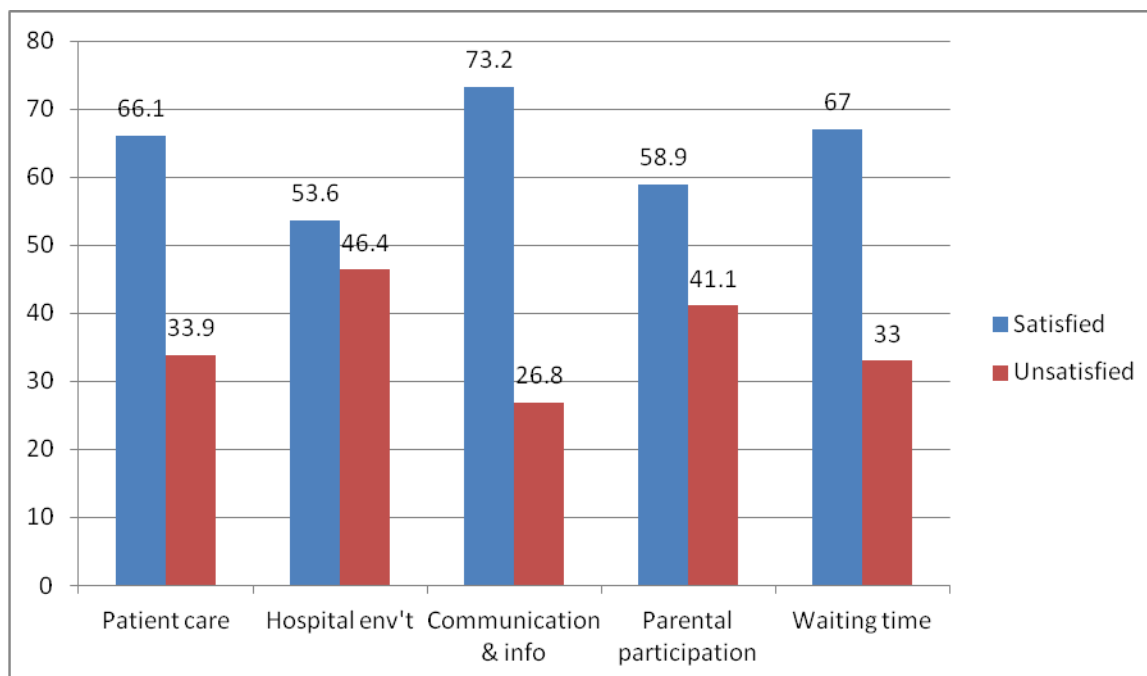
Large proportion of parents of hospitalized children in oncology ward and intensive care units (PICU & NICU) were found to be more satisfied about quality of care than parents in other pediatric wards, 83.8% and 65%, respectively where as parents whose children admitted to medical and surgical wards were less satisfied, 38.1% and 47.6%, respectively (Figure 2).



**Figure 2:** Proportion (%) of overall satisfaction of quality of care in pediatrics wards (units) of the Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia 2015 (n=224).

*Level of satisfaction dimensions (indices)*

Overall, the parents were most satisfied with their communication with the health care providers, waiting time, and patient care, 73.2%, 67%, and 66.1% respectively. However, they were less satisfied with their participation in their child's care and hospital environment (58.9%, 53.6%), correspondingly. (Figure 3)



**Figure 3:** The parental satisfaction level (%) by dimensions (indices) at the Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia June 2015 (n=224).

***Factors associated with parental satisfaction***

In multiple logistic regression analysis, the covariates: wards at which the child is hospitalized, parents' educational status, parents' occupation, duration of hospital stay, adequacy of care and adequacy of pain management were significantly associated with parental satisfaction ( $p < 0.05$ ) (Table 3).

Those parents whose children hospitalized in a pediatric surgical ward were much less likely to be satisfied as compared to parents in intensive care units (PICU & NICU) [AOR= 0.21(0.080-0.0569)]. Parents having a primary education were less likely to be satisfied than those who had no formal education [AOR= 0.22(0.073- 0.662)]. Parents who are farmers by their occupation were 3.45 times more likely to be satisfied as compared to housewives [AOR= 3.45(1.116-10.649)]. Parents who had less than seven days duration of hospital stays were 4.7 times more

likely to be satisfied with the care provided as compared to parents who had more than two weeks duration of hospital stay [AOR=4.75(1.84-12.265)].

**Table 3:** Bivariate and multiple regression analysis about parental satisfaction in the Tikur Anbessa specialized hospital, June 2015 (n=224).

Factors	Parental Satisfaction		95% confidence interval	
	Satisfied N (%)	Unsatisfied N (%)	COR	AOR
<b>Ward</b>				
Surgical	20(47.6)	22(52.4)	0.49(0.236-1.012)	0.21(0.080-0.569)**
Medical	16(38.1)	26(61.9)	0.33(0.157-0.695)**	
Oncology	31(83.8)	6(16.2)	2.78(1.059-7.275)*	
PICU & NICU	67(65)	36(35)	1	
<b>Educational status</b>				
No formal education	39(78)	11(22)	1	0.22(0.073-0.662)**
Primary education	41(51.3)	39(48.8)	0.30(0.133-0.660)**	
High school and above	54(57.4)	40(42.6)	0.38(0.174-0.834)*	
<b>Occupation</b>				
Government employee	11(73.3)	4(26.7)	2.84(0.816-9.873)	3.45(1.116-10.649)*
Private employee	28(58.3)	20(41.7)	1.45(0.678-3.081)	
Merchant	16(45.7)	19(54.3)	0.87(0.380-1.990)	
Farmer	48(77.4)	14(22.6)	3.54(1.633-7.671)**	
House wife	31(49.2)	32(50.8)	1	
<b>Annual income</b>				
< 12,000.00 birr	73(51.4)	69(48.6)	0.14(0.047-0.421)***	0.07(0.015-0.319)**
12,000-24,000 birr	31(64.6)	17(35.4)	0.24(0.073-0.807)*	
> 24,000 birr	30(88.2)	4(11..8)	1	
<b>Duration of hospital stay</b>				
7 days and below	60(77.9)	17(22.1)	3.68(1.884-7.174)***	4.75(1.840-12.265)**
8-14 days	26(53.1)	23(46.9)	1.18(0.593-2.340)	
14 days and above	48(49)	50(51)	1	
<b>Adequacy of care</b>				
Adequate	116(72.5)	44(27.5)	6.74(3.531-12.854)***	7.35(2.779-19.41)***
Not adequate	18(28.1)	46(71.9)	1	
<b>Adequacy of Pain management</b>				
Adequate	118(70.2)	50(29.8)	5.90(3.027-11.501)***	3.89(1.413-10.692)**
Not adequate	16(28.6)	40(71.4)	1	

COR=Crude odds ratio, AOR=Adjusted Odds ratio, \*=p <0.05, \*\*=p <0.01, \*\*\*=p <0.001

Those parents who had received adequate care for their child were 7.4 times more likely to be satisfied than those who had not received adequate care [AOR= 7.35(2.779-19.41)] and those who were pleased with the adequacy of pain management were 3.9 times more likely to be satisfied than those who were not pleased with the adequacy of pain management [AOR=3.89(1.413-10.692)] (Table 3).

## **Discussion**

The overall parental satisfaction was found to be 59.8%. This is somewhat comparable with the previous study conducted in the USA (64.5%) [26], but lower than other studies conducted in German (70%) [27] and the USA, which is found to be 69% [28]. This difference might be due to low socioeconomic, cultural variation, and low quality of health services provided in the setting. It might also attribute to the emerging of sophisticated technologies in developed countries which aids the health system to provide quality health care.

In this study, most of the parents agreed that nurses provided compassionate and respectful care by giving immediate response concerning their child's condition. Similarly, other previous study reported that physicians and nurses provided respectful care [29].

The study revealed that physicians and nurses were concerned about child's care and they encouraged parents to involve on their child's care, about course of illness, diagnosis, and treatment. In addition, most nurses and physicians had a friendly relationship with clients and parents. In line with this, other reports showed that intensive care professionals were concerned about patient and family-centered care and involved family members in the care of their child [30]. However, other evidence demonstrated that healthcare professionals find it difficult to build



up a relationship with the family or parents and to meet their needs [31]. This could be due to variation in methodology and variation in study periods.

Above two-third, (67.4%) of parents were satisfied with the information received from nurses concerning their child's course of illness, and 37.5% parents had the opportunity to discuss their child's examination and treatment. In addition, 52.7% of parents were informed by physicians regarding the outcome of procedures done for their child. However, other study conducted in Greek showed that parents had less opportunity to discuss with physicians and nurses concerning child's diagnostic tests, examinations, and treatments [29]. This difference may attribute to social and cultural variation.

Concerning communication and information, most parents from pediatric and neonatal intensive care unit, surgical, medical and oncology wards have felt satisfied. In addition, waiting time to receive care was satisfactory. It is consistent with other studies that showed parents were highly satisfied with level of information provided and communication between staffs and parents [29, 32, 33]. Nevertheless, parents from surgical and medical wards were not satisfied in the hospital environment and their participation and involvement in their child's care.

Furthermore, this study showed that parents who are farmer by their occupation were highly satisfied with the care provided to their child as compared to other occupational categories such as employees, merchant, housewife. Probably, farmers had strong trust towards care and treatment provided by nurses and physicians as result of low educational level. In addition, duration of hospital stay for less than or equal to one week, adequate care, and adequate pain management were predictors of parental satisfaction. This is in agreement with findings observed in other study [29].

Many studies revealed that parental expectation and communication between the parents and health professionals has significant impact on the overall rating of parental satisfaction [7, 8, 29, 34, 35]. Similarly, in this study parental communication was rated with the higher value for their satisfaction. Perhaps, this could be the most important indicator for parental satisfaction concerning clinical decision making, caring their child and family supports.

### **Conclusion**

The study revealed that above half of the parents were satisfied by the care their child had received. It also confirmed that the hospital wards at which the child was hospitalized, parents' educational status, parents' occupation, duration of hospital stay, adequacy of care and adequacy of pain management were determinant factors for parents' satisfaction concerning their child's care. The study strongly suggested that there is a great need for establishment of clinical practices addressing parental involvement in order to optimize parental satisfaction concerning hospital care of ill children.

### **Competing interests**

The authors declare that they have no competing interests.

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### **Authors' contributions**

All authors have been participated in proposal writing, data collection, data analysis, and manuscript writing. Finally, the paper was approved by all authors.

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