



**COLLEGE OF HEALTH SCIENCE
SCHOOL OF MEDICINE
SPECIALITY RESEARCH PROPOSAL**

Assessment of Parental Satisfaction and Associated Factors toward Their Child's Anesthesia Service at TASH, Addis Ababa, Ethiopia.

A Research Thesis to Be Submitted to Addis Ababa University School of Medicine in Partial Fulfillment for the Requirement of Specialty Certificate of Anesthesiology, Critical Care and Pain Medicine

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Acronyms

AAU	Addis Ababa University
ACCPM	Anesthesiology Critical Care and Pain Medicine
ASA	American Society of Anesthesiologists
GA	General Anesthesia
GC	Gregorian calendar
BDU	Bahir Dar University
PAPS	Pediatric anesthesia parental satisfaction
PACU	Post Anesthesia Care Unit
PONV	Postoperative nausea and vomiting
SPSS	Statistical Package for Social Sciences
TASH	Tikur Anbessa Specialized Hospital

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Abstract

Background:

Studies on quality improvement and intervention use patient satisfaction as an outcome measure, which is an important indicator of the quality of medical services. Understanding parents' opinions and satisfaction with their child's anesthesia service in the hospital is vital for hospital funding and parent experience. Many factors contribute to parental satisfaction, including the accessibility and convenience of services, institutional structure, interpersonal relationships, the competence of health professionals, and a parent's own expectations and preferences. A lot of parents anticipate a standard anesthesia visit. Nevertheless, a child's underlying factors in seeking anesthesia care residual sedation, pain, nausea, vomiting, and a range of other major and minor problems can occasionally impede receiving timely care and recovery from anesthesia. The study area has a dearth of data on this subject. There is a lack of information on this topic in the field. Therefore, getting data on parents' levels of satisfaction with their children can reduce this limitation. It also played a vital role in developing a suitable strategy to change and modernize the entire anesthetic service and make it more patient-centered.

Objective:

The purpose of this study was to determine the level of parental satisfaction with their child's anesthetic service and associated factors.

Methods: An institution-based cross-sectional study was conducted from November 1, 2023, to April 30, 2024, G.C., at Addis Ababa University, TASH, using the PAPS Tool. Trained data collectors approached participants' 24-hour post-anesthesia hours for interviews. Data was entered, cleaned, and analyzed using SPSS version 27 software. The level of satisfaction was dichotomized into satisfied and unsatisfied using the demarcation threshold formula. Bivariate and multivariate binary logistic regression was done to assess parental satisfaction and associated factors across different groups of independent variables. P values less than 0.05 were considered significant throughout the analysis. Results were presented using narration, tables, charts, and graphs.

Results: The reliability test showed that the PAPS tool had excellent internal consistency (Cronbach's α = 0.916). A total of 300 respondents participated in the study (100% response rate). The proportion of parental satisfaction toward their child's anesthesia service was 80% (95% CI: 75–85%); rural residents,

parents of older children, and parents whose child had emergency procedures were associated with high satisfaction scores.

CONCLUSION AND RECOMMENDATION

There was a promise in the parents' happiness with the anesthesia service for their child. Rural resident parents, parents of older children and children who underwent emergency procedures, had high rates of parental satisfaction with their child's anesthetic care. Parents from urban areas, as well as parents of young children and whose children had elective procedures, should receive extra care. Parental satisfaction toward pediatric anesthesia is reduced when parents lack enough and understandable information, do not know who the anesthesiologist is, and do not visit the post-anesthesia service. Thus, the provision of comprehensive information on their child's anesthesia care process, psychological or emotional support for the parent's self-introduction and the role of the care provider, and post-operative regular anesthesia care provider visits are necessary to boost their satisfaction.

1. Introduction

1.1 Background

Parent satisfaction is an important measure of the quality of health care and is used as an outcome measure in interventional and quality improvement studies. Understanding parents' opinions and satisfaction with their child's anesthesia service in the hospital is vital for hospital funding and parent experience. Many factors contribute to parental satisfaction, including the accessibility and convenience of services, institutional structure, interpersonal relationships, the competence of health professionals, and a parent's own expectations and preferences.

A lot of parents anticipate a standard anesthesia visit. Nevertheless, a child's underlying factors in seeking anesthesia care—residual sedation, pain, nausea, vomiting, and a range of other major and minor problems—can occasionally impede receiving timely care and recovery from anesthesia. The study area has a dearth of data on this subject. There is a lack of information on this topic in the field. Therefore, getting data on parents' levels of satisfaction with their children can reduce this limitation. It also played a vital role in developing a suitable strategy to change and modernize the entire anesthetic service and make it more patient-centered.

1.2 Statement of the problem

Professionals and their opinions have primarily reflected a clinical perspective, especially in low-income countries like Ethiopia, which is quite different from that of clients' outlook and is believed to be a difficult concept to measure and interpret (9). Despite the fact that patient satisfaction rates are high in many healthcare settings, there is little published literature on parents' satisfaction with pediatric anesthetic services and related characteristics in Ethiopian public hospitals. Knowing the parents' expectations and meeting those expectations consequently has a significant impact on how satisfied they are. Lower-than-expected care typically results in dissatisfied parents. As a result, this study evaluated parent satisfaction and related variables at Black Lion Specialized Hospital in order to support care providers by improving their service delivery to make their clients more content.

1.2. Significance of the study

Parental satisfaction is an important measure of the quality of health care and is used as an outcome measure in interventional and quality improvement studies. Many studies have been done to address this issue in different countries. Despite this, there are only a few published studies on parental satisfaction and associated factors in ward pediatric anesthesia services in this country. Studies on parental satisfaction and associated factors will help improve the current practice. A very attractive concept for assessing the quality of parental satisfaction and associated factors is addressing this issue from the parent's perspective. This can be achieved by measuring the level of parent satisfaction with the anesthesia service they received in the perioperative period. In this country, parental satisfaction and associated factors of pediatric anesthesia care are undervalued, despite the fact that they have a significant impact on improving pediatric health care quality. There hasn't been a means to measure the quality of parental satisfaction. Therefore, it would be prudent to assess the level of parental satisfaction with their child's anesthesia service as an indicator of quality improvement. This will help to identify gaps in the management of pediatric patients and improve the practice subsequently. This study will have a significant impact on the formulation of an appropriate strategy to modify and transform overall parental satisfaction.

Literature Review

The findings on parental satisfaction are inconsistent, which may be explained by variances in institutional structures, interpersonal connections, the competency of educational professionals, parents' expectations and preferences, and the data collection methods utilized. Among parents whose child receives anesthetic care, overall satisfaction with the care was 68%, OR/induction satisfaction was 69%, and overall satisfaction was 71%. Another study shows overall parental satisfaction among 96.7 percent of patients receiving anesthesia services. According to a prospective observational study conducted in India, 57% of parents were satisfied with the preoperative information they provided (9). A prospective questionnaire-based survey done in Nigeria shows that the 'overall quality of care' was rated as fair or poor by 12.0% and good, very good, or excellent by 88.0% of respondents (3). According to a study in Italy, parents generally indicated a high level of satisfaction, which was positive and significantly connected with the comfort of the surroundings and the postoperative observations made by the anesthesiologists and nursing staff (5). Children's lack of concern the day before surgery and the anesthesiologist and nurses' composed manner have been linked with preventing anxiety on the day of surgery and preventing fear during anesthesia.

A similar study in Poland showed that parental satisfaction, measured by the mean score, was high. Parents of children under the age of six, those admitted in an emergency mode with a diagnosed post-trauma condition, and those with greater education reported being less satisfied with nursing treatment. Preoperative medicine recipients' parents reported higher levels of satisfaction with their kids' care. Less anxious parents were more likely to be pleased with their child's care (14).

Yet another prospective observational study done in Portland reveals the level of overall satisfaction was high, and it was highly correlated with the anesthesiologists' care (10). Overall satisfaction was not significantly influenced by previous sedations, other types of sedation, the age of the child, or any particular physician. Compared to caregivers of less anxious children, caregivers of anxious children reported lower levels of satisfaction. The lowest mean satisfaction scores were given by parents of children who received magnetic resonance imaging (10). Denmark-based research showed that the wait times associated with admission, meeting a child's requirements, and providing information regarding care and treatment represented the biggest gaps between priority and satisfaction. Cross-sectional studies carried out in Debre Tabor Parents were generally 47.8% satisfied with the services provided by neonatal intensive care units. Parental satisfaction was influenced by the parents' gender, residency, parental hospital stay, birth weight, and gestational age (8).

According to data from an institution-based cross-sectional study done in Bahir Dar, 59.8% of parents were overall satisfied with their children's care. Parents' educational status, occupation, length of hospital stay, quality of care, and effectiveness of pain management were all discovered to be significant predictors of overall parental satisfaction (7). According to a Gonder Institution-based cross-sectional survey, 77.7% of parents felt satisfied with the pediatric anesthesia services that were given to their children. High satisfaction levels were associated with non-anxious, male, employed, urban-resident parents, and parents of children who had received premedication (11). Millions of patients receive medical care from the anesthesiology, critical care, and pain medicine departments of the AAU College of Health Sciences, TASH. According to our search and information, there hasn't been any prior research in the subject area that could indicate how satisfied parents are with the anesthesia services provided for their children. Therefore, the aim of this study is to determine the level of parental satisfaction with their anesthesia services and associated factors.

3.Objectives

3.1 General Objective

To assess the level of parental satisfaction with their child's anesthesia service at Tikur Anbessa Specialized Hospital (TASH) from November 1, 2023, to April 30, 2024 G.C.

3.2 Specific objectives

To assess the level of parental satisfaction with perioperative anesthesia care in pediatric patients at Tikur Anbessa Specialized Hospital (TASH) from November 1, 2023, to April 30, 2024 G.C.

Determine factors affecting parents' satisfaction with perioperative anesthesia care in the pediatric population at Tikur Anbessa Specialized Hospital (TASH from November 1, 2023, to April 30, 2024 G.C.).

4. Methods and Materials

4.1. Study Area, Study Design, and Period

An institution-based cross-sectional study was conducted to determine the level of parental satisfaction and associated factors about their child's anesthesia service at Tikur Anbessa Specialized Hospital (TASH) from November 1, 2023, to April 30, 2024 G.C.

4.2. Source Population

Parents of pediatric patients who got anesthesia care during the study period at TASH and stayed at the hospital more than 24 hours postoperatively from November 1, 2023, to April 30, 2024.

4.3. Study population:

All parents of pediatric patients who got the service and met the inclusion criteria were included.

4.4. Eligibility

Inclusion criteria:

All parents and/or guardians of children who get anesthesia service during the study period

Exclusion Criteria:

- Parents who were unable to provide verbal informed consent,
- Parents whose child is older than 14 years and younger than 1 month,
- Parents who refused to give consent, were absent during the data collection period, and those with communication barriers.
- All parents and/or guardians whose children operated under local anesthesia at the outpatient department (OPD) level and children admitted to the ICU.

4.6. Study Variables

4.6.1. Dependent Variables:.

Parental satisfaction (satisfaction and dissatisfaction)

4.6.2 Independent Variables

Socio-demographic

- parental (gender, sex, profession, religion, educational status, marital status, residency language, parental hospital stay),
- child(sex,age)
- Surgical and anesthetic-related factors (ASA physical status, type of procedure, urgency of procedure, anesthetic technique, anesthetic duration, previous anesthetic exposure),
- PAPS tool questions-

(Questions the anesthesia team answered Prior to the child's surgery, the amount of information provided by the anesthesia team was understood and satisfied by the parent. The anesthesia team explained to me how my child might feel physically and emotionally. post-op pain, nausea, and vomiting control postoperative anesthesia visit, number of visits, and treatment complaints during the visit ,attention paid by the anesthesia team to parents concerns, care delivered by the anesthesia team, respect for a child's privacy at all times by the anesthesia team, knowing who the anesthesiologist was and his or her role in my child's care)

4.7. Sample size determination

The sample size (n) for this study was calculated using the single proportion population formula. Based on a previous study performed in Gondar University Hospital, Ethiopia, which showed that the

magnitude of satisfaction was 77.7%, assume a 95% confidence interval with a 5% margin of error and a nonresponse rate of 10%, and finally, the sample size for the study was calculated as follows:

$$N = \frac{(z_{\alpha/2})^2 \times p \times (1-p)}{d^2} = \frac{(1.96)^2 \times 0.77 \times (1-0.77)}{(0.05)^2} \approx 300$$

where n was the required sample size and p = 77.7% is the magnitude of satisfaction from Gondar University Hospital; Z/2 is the value (Z-statistic) at the 95% confidence level (= 0.05), which is 1.96; d is the margin of error 5% (0.05) with 10% nonresponse rate; and the final sample size was n = 300.

4.8. Sampling Procedure and data Collectors

Total enumeration sampling technique was used for selecting study participants after fulfilling the eligibility requirements, participants were selected consecutively from several pediatric surgical specialties in order to create the required sample size. When it was convenient for them, trained data collectors met participants in their individual wards, explaining the study and getting verbal assent using the consent form on the first page of the questionnaire. Patients were assured of confidentiality and that their care would not be impacted in any way, regardless of their decision to participate in the study, which was optional.

4.9. Data collection tool

To assess the level of parental satisfaction with pediatric anesthesia services and their associated factors, the Amharic version of PAPS tool, was adopted from Gondar University hospital, was used since its prediction value for parent satisfaction was tested in 2021 by Biruk et al. It has a 14-item survey with a five-point Likert scale from strongly disagree to strongly agree (1 to 5). The answers to every item in each dimension were added up to determine the scores for that dimension. Parents' overall and component-wise satisfaction levels were dichotomized as: satisfied and unsatisfied, using the demarcation threshold methodology(20).

The formula for determining the demarcation threshold is $([\text{total highest score} - \text{total lowest score}]/2 + \text{total lowest score})$. Patients who scored <42 out of 70 were judged unsatisfied, while those who scored 42 or higher were considered satisfied. The tool was used after translating to the predominantly spoken Amharic language then translated back to English language by another translator to check for

consistency with the original English version. The Amharic version of the questionnaire was given to the study participants as a face to face interview.

4.10. Data Quality control

To assure the quality of the data, the following measures were taken: A pre-test was conducted at TASH two weeks before the start of main data collection on 10 percent of the sample size, and analysis showed no modification in the questionnaire was required. The reliability test of the PAPS tool was done using the Cronbach's α coefficient, which shows excellent (.916). The completed questionnaire was checked for completeness before data entry. Data cleaning was done before data analysis to check and remove the questions with missing values.

4.11. Data Collection and Analysis

A total of 300 participants were interviewed. Data was entered into SPSS (Version 27) statistical software for analysis. After data cleaning, descriptive statistics were calculated for all parental characteristics and PAPS response items using frequency (percent) and mean (SD). Bivariate and multivariate Binary logistic regression and analyses were used to identify factors determining the level of parent satisfaction and to control for possible confounding factors. Variables with a p-value of 0.2 in binary logistic regression were transferred to multivariable logistic regression, and variables with a p-value of 0.05 with a 95% confidence interval (CI) were deemed predictor variables. Participants were interviewed about their religion, educational level, residency language, and Childs age, gender, and anesthetic charts were also revised to obtain the rest of the clinical data. Results were presented using texts, tables, charts, and graphs. Training was given to data collectors to obtain socio-demographic and clinical data relevant to the study. During the data collection period, parents were approached after 24 hours of post-anesthesia care.

5. Operational Definitions

Parents refer to any caregiver, guardian, or attendant who attended the pediatric patient during the interview period.

- Pediatrics: age between 0 and 14 years.
- ASAI: A normal, healthy patient

- ASAI: A patient with mild systemic disease that results in no functional impairments
- Demarcation threshold for satisfaction ($[(\text{total highest score} - \text{total lowest score})/2 + \text{total lowest score}]$).
- Parental satisfaction: Parents who scored 42 or more points out of 70 were considered satisfied, while those who scored below 42 were regarded as unsatisfied.
- Service: Providing accommodation and activities required by the public or others

6. Ethical Consideration

Ethical clearance was obtained from the department of anesthesiology, critical care, and pain medicine at Addis Ababa University. The study participants were given a clear explanation of the study's purpose. Each participant gave their verbal informed consent before any information was gathered. Throughout the duration of the study, participants' personal information was kept completely anonymous, and confidentiality was guaranteed. The information was only used to further the study's objectives..

7. Result

The reliability of the total scale items of the Pediatric Anesthesia Parent Satisfaction (PAPS) questionnaire was determined to be excellent in this research (Cronbach`s $\alpha = 0.918$). Three hundred individuals participated in the study, with a 100% response rate.

Socio-demographic and Related Characteristics of Parents and Children

Three hundred (300) parents whose children had received anesthesia care were included in the study, with a 100% response rate. Out of the total number of parents, two hundred Fifteen (71.4%) were mothers, one hundred nighty three (64%) were 25 to 39 years old, two hundred seventy-two (90.4%) were married, one hundred fifty-eight (52.7%) residents were urban, and one hundred nineteen (40%) of the respondents attended college and above.

TABLE 1 | Socio-demographic characteristics of parents related with parental satisfaction toward their child’s anesthesia service, N = 300, 2024.

Characteristics	Frequency (n)	Percentage (%)	
Parental gender	Mother	215	71.4
	Father	85	28.2
Parental Age	18-24	42	14
	25-39	193	64
	>40	65	21.6

Marital status	Married	272	90.4
	Un married	28	9.3
Residency	Urban	158	52.7
	Rural	142	42.3
Educational level	No formal education	39	13
	Primary school	59	19.7
	Secondary school	83	27.7
	collage and above	119	39.7
Profession	House wife	82	27.3
	Farmer	43	14.3
	Student	6	2
	Government employ	80	26.7
	Private employ	89	29
Parental hospital stay	< 1 week	215	71.7
	< 1 week	85	28.3
Religion	Orthodox	133	44.3

	Muslim	95	30.3
	Protestant	55	18.3
	Other	21	7
Language	Amharic	120	40
	Afan oromo	92	30.7
	Tigregna	31	10.3
	Other	57	19

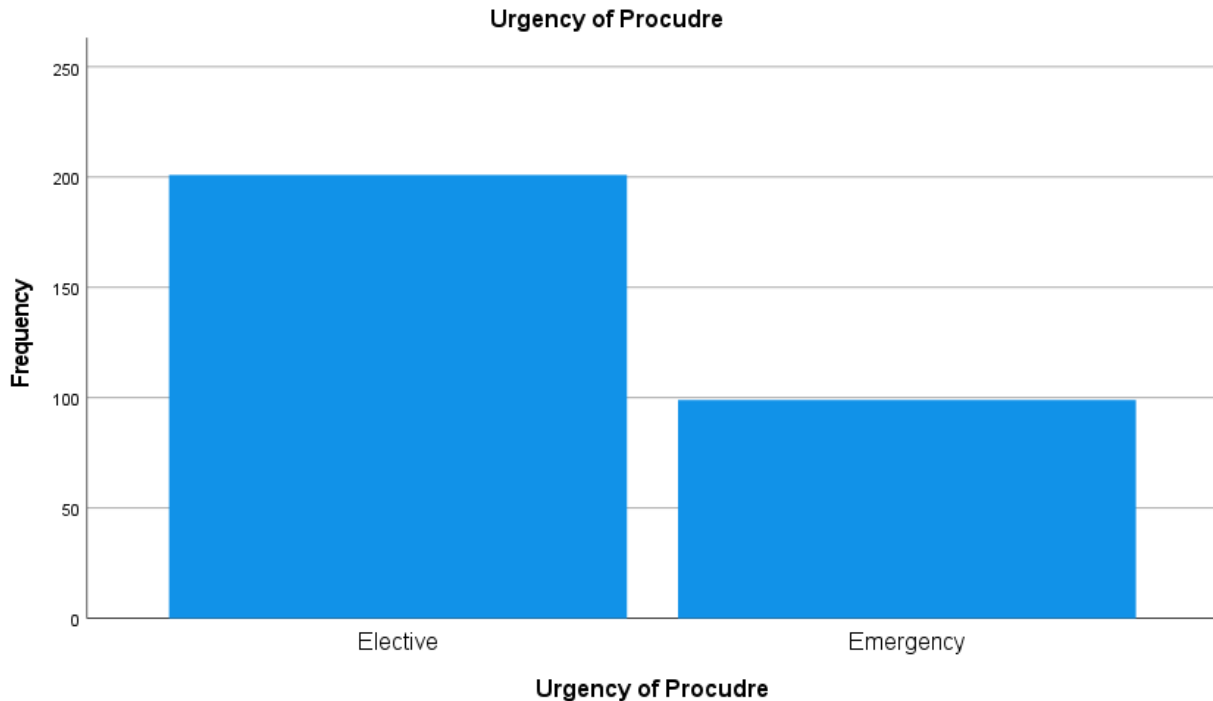
Eighty-nine (29%) of the sample respondents are private employees. Two hundred fifteen (71.7%) have less than one week hospital stay, and one hundred thirty-three (44.3%) are orthodox. 120 (40%) respondents spoke Amharic, 92 (30.7%) of the respondents. The majority of children, 189 (63%), were male. Most of the children, 155 (51.7.3%), were American Society of Anesthesiologists (ASA) class I. About 164 (54.7%) children had an operation under general anesthesia.

TABLE 2 | Socio-demographic and related characteristics of children, N = 300, 2024.

Characteristics		Frequency (n)	Percentage (%)
Child gender	Male	189	63
	female	111	37
Child age	< 1 year	128	42.7
	1-4 year	96	32
	5-10 year	56	18.7
	11-14 year	20	6.7
ASA physical status	ASA I	155	51.7
	ASA II	145	48.3

Type of procedure	Major	300	1300
	minor	0	0
Urgencyof procedure	Elective	201	67
	emergency	99	33
Duration of anesthesia	< 1H our	11	7.3
	1 to 2 hour	78	26
	>than 2 hour	211	70.3
Mode of anesthesia	GA	164	54.7
	RA	16	5.3
	COMBINED	120	40
Previous anesthetic history	YES	131	43.7
	NO	169	56

More than half of the procedures, 201 (67%), were elective operations. 211 (70.3%) procedures taken more than two hour. All procedures were major operations. Only 131 (43.7%) children had a previous anesthetic history. The overall proportion of parental satisfaction about their child's anesthesia service was 80% (95% CI: 72.3, 82.4%). The majority of respondents, 220 (73%), were willing to recommend this anesthesia team to others in their families. About 240 (80%) respondents were satisfied with the response of the anesthesia team to all their questions prior to their child's surgery. The majority of parents 282



This bar chart shows urgency of the procedure.

(94%) were satisfied with the amount of information provided by the anesthesia team. 237 (79%) parents were satisfied with their child's privacy and respect at all times by the anesthesia team, whereas two hundred 236 (78.6%) parents were satisfied with the attention and concerns of the anesthesia team to their child's care 225 (75%) parents were satisfied with their child's pain being well-controlled. 222 (74%) of parents) did not feel their child's nausea and vomiting after anesthesia was well-controlled. The majority of parents (67.22%) were satisfied with how their child fell asleep and awoke after anesthesia. The majority of respondents, 220 (73%), were willing to recommend this anesthesia team to others in their families.

Two hundred thirty-six (78.6) respondents were satisfied with the care of the child received by the anesthesia team, and 240 (80) parents were satisfied that the anesthesia team behaved professionally and respectfully toward their child.

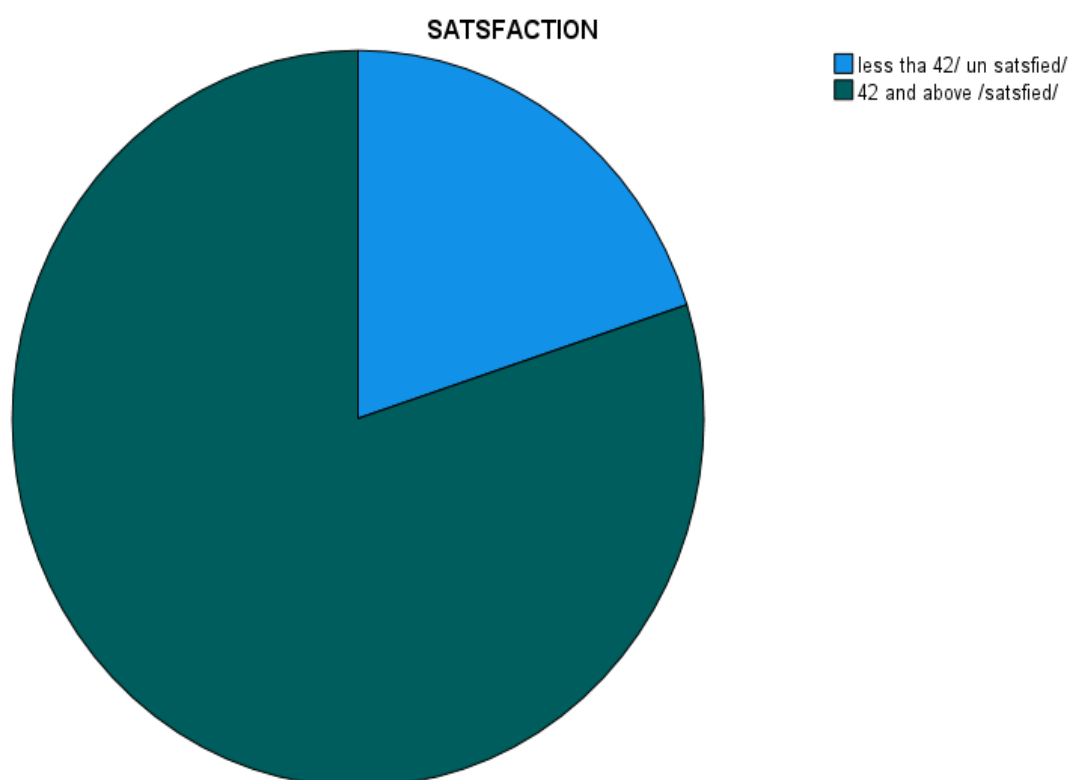
On the other hand, 240 (80%) parents were unsatisfied with not being visited by the anesthesia team after the child's anesthetic care, and only sixty (20%) respondents knew who the anesthesiologist was and his or her role in the child's care.

Table3. Level of Parental Satisfaction toward Their Child's Anesthesia Service

Item	Satisfied (n, %)		Dissatisfied

The anesthesia team answered all my questions Prior to my child's surgery	240(80)	60(20)
I was satisfied with the amount of information provided by the anesthesia team.	282(94)	18(6)
The information given to me by the anesthesia team was understandable	286(95.3)	14(4.6)
The anesthesia team explained to me how my child might feel physically and emotionally.	238(79.33)	62(20.66)
I was satisfied with the way my child fell asleep and woke up from anesthesia.	233(77.66)	67(22.33)
I felt my child's pain was well-controlled.	225(75)	75(25)
I felt my child's nausea and vomiting was well-controlled.	222(74)	78(26)
I felt satisfied after the anesthesia team visited my child post operatively	60(20)	240(800)
The Anesthesia team behaved professionally and respectfully toward my child	240(80)	60(20)
My child's privacy was respected at all times by the anesthesia team.	237(79)	63(21)
The anesthesia team paid attention to my concerns regarding my child's care.	236(78.6)	64(21.33)
I was satisfied with the care my child received by the anesthesia team	236(78.6)	64(21.33)

I know who the anesthesiologist was and his/her role in my child's care	60(20)	240(80)
.	220(73)	80(26.66)
I would recommend this anesthesia team to others in my family		



This pie chart shows the level of satsfaction

Bi-Variable Analysis

In the bi-variate logistic regression, variables like parental residency, educational level, religion, sex of the child, ASA physical status, urgency of the procedure, and previous anesthetic history had a p-value of <0.2 and were considered to be factors associated with parental satisfaction about their child's anesthesia service.

Multi-Variable Analysis

In multivariable logistic analysis, variables such as parental residency age of child, urgency of procedure, and A with a p-value of < 0.05 were considered significant predictors of parental satisfaction toward their child's anesthetic service.

Variable	Category	staff		Odds ratio	
		Satisfied (%)	Unsatisfied (%)	COR 95%CI	AOR
Residency	Urban	133(74.2)	25(15.8)	1	1
	Rular	107(75.4)	35(24.6)	.575(.324, 1.019)	.340(.117,. 988)
Educational Level	No Formal Education	28(71.8)	11(28.2)	1	
	Primary School	45(70.3)	14(23.7)	1.263(.503, 3.168)	
	Secondary School	66(79.5)	17(20.5)	1.525(.634, 3.699)	
	Collage And Above	101(84.8)	18(15.2)	2.204(.934, 5.204)	
	Other	17(80.95)	4(19.05)	0.984(.304, 3.198)	
Child Age	<1	97(75.78)	31(24.22)	1	1
	1-4	74(77.1)	22(22.9)	1.075(.576, 2.007)	.149(0.19, 1.196)
	5-10	50(89.3)	6(10.7)	2.663(1.042, 6.807)	.413(046,3 .692)
	11-14	19(95)	1(5)	6.072(.781, 47.222)	2.006(990, 4.065)
ASA Physical Status	I	132(85.2)	23(14.8)	1	
	II	108(74.5)	37(25.5)	0.509(.285, .908)	

Urgency Of Procedure	Elective	155(77.1)	46(22.9)	1	1
	Emergency	85(85.9)	14(14.1)	1.802(.937, 3.466)	.251(.071, 889)

RESIDENCY

Parents of child who lived in Rural area were .340 times more likely to be satisfied than urban residents [AOR=.340.117, 988]

Child age

Parents of older child 2.006 times more likely to satisfied than young age. **Urgency of procedure**

Parents of children who undergo emergency procedures .251 times or more likely be satisfied than elective procedures.[AOR 251(CI 071,889).

8. Discussion

This research was conducted to determine the level and associated factors of parental satisfaction with their child's anesthesia service at TASH, a comprehensive tertiary specialized referral hospital in Ethiopia. The overall proportion of parental satisfaction about their child's anesthesia service was 80% (95% CI: 75, 85. %). Despite the fact that the anesthesiology department had a preoperative assessment before surgery, parents' satisfaction with their child's anesthesia service was suboptimal. Possible explanation: Most patients didn't know who the anesthesiologist was, his or her role, or the level of post-anesthesia care. Knowing the responsibility and role of care providers is crucial to providing quality healthcare delivery. The level of parental satisfaction in our study is comparable to the study done in Poland, which showed that parental satisfaction, measured by the mean score, was high (14). The level of parental satisfaction was lower with the findings of a study conducted in Nigeria (88%); however, it was higher than a result reported in India (57%). This is most likely attributable to socio-cultural variations among parents as well as differences in the quality of healthcare delivery(9). Parental satisfaction in our study was higher than in studies conducted at Debre Tabor and Gonder University Hospital in Ethiopia (77.7%) (11).Parents were generally 47.8% (8). This may be related to variations in health care provider institution structure, preoperative evaluation done a day before surgery. Parental satisfaction in our study was higher than in studies conducted at Debre Tabor and Gonder University Hospital in Ethiopia (77.7%) (11)surgery by residents, and anesthesiology. High satisfaction levels were associated with emergency procedures among rural-resident parents. this technique, parents and anesthesia care providers can have more favorable interactions and parents will understand the information given to them regarding anesthesia and surgery. Parents want to have an entire knowledge of anesthesia plans, knowing the responsible anesthesiology information about all possible benefits and

adverse effects of drugs; thus, proper communication between healthcare providers and patients or their families is essential. The perioperative communication between the healthcare providers and the parents, as well as proper information distribution to the family and post-operative visits by health care providers, minimize parental worry and promote satisfaction with the care.

Our findings revealed that parents in rural areas were 66% more likely than those in urban areas to be satisfied with their child's anesthetic care. Another study in Ethiopia found that parents in rural areas were more likely to be satisfied than their counterparts in urban areas (5). This is because people living in urban areas understand their right to patient autonomy and have the ability to question healthcare providers about their condition, their progress, and the proposed course of action (10).

9. Strength and Limitation of the Study

9.1 Strength

A relatively large number of parents participated in this study for a more representative group of people with the maximum possible sample size.

The study used a standard assessment tool to collect data after confirming the reliability.

9.2. Limitations

Although sample size is fairly large, this study used total enumeration sampling method to select samples. This may have compromised the representativeness of the samples. This study did not focus on assessing the pattern of satisfaction rather it focused on the outcome of parental satisfaction. The study relied on parents' ability to recall and report their feeling during a time of recovery. This might have introduced recall bias in to the results. Due to the nature of the study design, the level of satisfaction was recorded only at one point in time and trends of measurements were not done to see the change in satisfaction over time. Finally, the study relied on self-reported satisfaction from the parents which is highly subjective to social desirability bias, as parents might have given responses that would make them labeled as the humble patient instead of true reflection of their satisfaction.

10. CONCLUSION AND RECOMMENDATION

Overall, parent's satisfaction with their child's anesthesia service was promising. Parents who were lived in rural area whose child had emergency procedures an increasing child age, had high rates of parental satisfaction with their child's anesthetic care. Parents from urban areas, as well as parents of young child, and whose child had elective procedures should receive extra care. Parental Satisfaction toward Pediatric Anesthesia reduced when parents have no enough and understandable information not

knowing who was the anesthesiology and not visited post anesthetic service. Thus, the provision of comprehensive information on their child's anesthesia care process and psychological or emotional support to parent's self-introduction and role of the care provider and post-operative regular anesthesia care provider visit are necessary to boost their satisfaction.

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Appendix

Appendix1:

Information sheet

Addis Ababa University School of Medicine

Subject information sheet

Hello, my name is ----- I am here on behalf of Dr. Yalemzerf Berhe, a second-year resident in Anesthesiology, critical care, and pain medicine at the School of Medicine at Addis Ababa University. She is conducting research on Assessment of Parental Satisfaction Toward Their Child's Anesthesia Service and Associating Factors at Addis Ababa University, College of Health Sciences, TASH". She has received permission from Addis Ababa University School of Medicine and Tikur Anbessa Specialized Hospital officials to conduct the study.

You were selected to participate in this study because your child got anesthesia and anesthetic care for your operation within 24 hours. The respondents who participated in this study were only based on their want to participate. You have the right to choose not to take part in this study. The respondents have the right to stop at any time or withdraw without giving any reason, and you were not subjected to any ill-treatment. There was no direct benefit from participating in this study, but in the future, the information gathered by this study will help policymakers, programmers, and researchers give appropriate attention to issues of interest and design specific treatment options.

The information that you provide will be kept confidential by using only code numbers and locking the data. Only the members of the study team will have access to the non-coded data, and the data was not

be used for purposes other than the study. The respondent's participation was very important for the success of this study.

Appendix 2: Informed consent

Consent Form

TITLE OF STUDY

Assessment of Parental Satisfaction and Associated Factors toward Their Child's Anesthesia Service in TASH, Addis Ababa, Ethiopia,

Primary Resident Name: Dr. Yalemzerf Berhe, second-year ACCPM resident

Primary Advisor: Dr. Getachew Secondary advisor: Dr. Rahel T.

Department: ACCPM

Address: Addis Ababa Phone: (+251) 986767406 Email: yalemzerfberhe@gmail.com

PROCEDURES

Cross-sectional study using a semi-structured questionnaire and checklist by trained data collectors.

RISKS There is no anticipated risk to you if you participate in this study.

BENEFITS You are contributing to the improvement of anesthesia services in the hospital and in Ethiopia as a whole.

CONFIDENTIALITY

Every effort was made by the researcher to preserve your confidentiality, including the following: assigning code names or numbers for participants that was used on all research notes and documents.

CONTACT INFORMATION

If you have questions at any time about this study, you may contact the researcher whose contact information is provided above.

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. If you decide to take part in this study, you were being asked to sign a consent form. After you sign the consent form, you are still free to withdraw.

CONSENT

I have read and understood the provided information and have had the opportunity to ask questions. I consent to take part in the research study "Assessment of Parental Satisfaction and Associated Factors Toward Their Child's Anesthesia Service" at Addis Ababa University College of Health Science, TASH Ethiopia. "

Participant's Signature _____ Date _____

Researcher's Signature _____ Date _____

1.Parental gender	1.Mother 2.Father
2.Age	1.18–24 2.25–39 3.40 and above
3.Marital status	1.Married 2.Not married
4.Residency	1.Urban 2.Rura
5.Educational level	1.No formal education 2.Elementary school 3.Secondary school 4.Collage and above
	1.Housewife 2.Farmer 3.Student

6.Profession	4.Gov't employ 5.Private employ
7.Parental hospital stay	1.≤1 week 2.>1week
8.Religion	1.Orthodox Christian 2.Muslim 3.Protestant 4.others
9.Language	1.Amharic 2. Affan oromo 3.Tigrigna 4.other
1.Gender	1.Male 2,Female
2.Age (year)	1.<1 2.1–4 3.5–10 4.11–14
3.ASA physical status	1.I 2.II
4.Type of Procedure	1.Major operation 2.Minor operation
5.Urgency of procedure	1.Elective 2.Emergency
6. Anesthesia time	1.< 1 hour 2.1-2 hours

	3.> 2 hours
7.Anesthetic technique	1.General anesthesia 2.regionalanesthesia 3.Combined RA and GA
6.Previous anesthesia history	1.Yes 2.No

II SATISFACTIN MEASURING QUESTIONNAIRES

Instruction: Please give one answer among the alternatives that most accurately reflects your view on each statement. The alternative answers are as follows

1. = Strongly disagree 3. = Neutral 5. = Strongly agree
2. = Disagree 4. = Agree

1	Dose the The anesthesia team answered all your questions Prior to the child's surgery	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
2	Are you satisfied with the amount of information provided by the anesthesia Team?	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
3	Was the information given to you by the anesthesia team was understandable?	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

4	The anesthesia team explained to you how your child might feel physically and emotionally.	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
5	Are you satisfied with the way your child fell asleep and woke up from anesthesia	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
6	Do you felt your child's pain was well-controlled?	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
7	Do you felt your child's nausea and vomiting was well-controlled?	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
8	Do you think your child received the highest quality care during this surgical experience by the hospital team?	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
9	Do you thinkThe Anesthesia team behaved professionally	1. Strongly disagree 2. Disagree

	and respectfully toward your child?	3. Neutral 4. Agree 5. Strongly agree
10	Do you believe that child's privacy was respected at all times by the anesthesia team.	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
11	Do you believe that The anesthesia team paid attention to my concerns regarding my child's care.	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
12	Are you satisfied with the care to your child received by the anesthesia team.	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
13	Do you know who was the anaesthesiologist and his/her role in your child's care	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree
14	Would you recommend this anesthesia team to others in your family	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

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የሕክምና ትምህርት ቤት

የርዕሰ ጉዳይ መረጃ ወረቀት

ጤና ይስጥልኝ ስሜ ----- በዶ/ር ያለምዘርፍ በርሄ ስም መጥቻለሁ በአዲስ አበባ ዩኒቨርሲቲ የሕክምና ትምህርት ቤት ተማሪ. "የወላጆች እርካታ እና ተያያዥ ምክንያቶች በልጃቸው ማደንዘዝ አገልግሎት በTASH, አዲስ አበባ 'ኢትዮጵያ' ላይ ጥናት እያካሄደች ነው. ጥናቱን ለማካሄድ ከአዲስ አበባ ዩኒቨርሲቲ ህክምና ትምህርት ቤት እና ከጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል ኃላፊዎች ፈቃድ አግኝታለች።

በዚህ ጥናት ላይ ለመሳተፍ ተመርጠዋል ምክንያቱም በአሁኑ ጊዜ በTASH የማደንዘዝ አገልግሎት እያገኙ ነው። በዚህ ጥናት ውስጥ ያለዎት ተሳትፎ ለመሳተፍ ባሎት ፍላጎት ላይ ብቻ የተመሰረተ ይሆናል። በዚህ ጥናት ውስጥ ለመሳተፍ የመምረጥ መብት አልዎት። ፍቃደኛ ከሆናችሁ በማንኛውም ጊዜ ለማቆም ወይም ምንም ምክንያት ሳትሰጡ የመውጣት መብት አላችሁ እና ምንም አይነት በደል አይደርስባችሁም። በዚህ ጥናት ውስጥ መሳተፍ ምንም አይነት ቀጥተኛ ጥቅም አይኖርም, ነገር ግን ወደፊት በዚህ ጥናት የተሰበሰበው መረጃ በ TASH ውስጥ ብቻ ሳይሆን በሌሎች ተቋማት የሚሰጠውን እንክብካቤ ጥራት ለማሻሻል ይረዳል.

ያቀረቡት መረጃ ኮድ ቁጥሮችን ብቻ በመጠቀም እና ውሂቡን በመቆለፍ በሚስጥር ይጠበቃል። በኮድ ያልተደገፈ መረጃን ማግኘት የሚችሉት የጥናት ቡድኑ አባላት ብቻ ሲሆኑ ውሂቡ ከጥናቱ ውጪ ለሌላ አገልግሎት አይውልም። ለዚህ ጥናት ስኬት የእርስዎ ፍላጎት እና ንቁ ተሳትፎ በጣም አስፈላጊ ነው።

ስለ ጥናቱ ተጨማሪ መረጃ ወይም ማብራሪያ ከፈለጉ፣ ይህን አድራሻ ማግኘት ይችላሉ።

ስም: ዶ/ር ያለምዘርፍ በርሄ ስልክ- +251-986767406

ኢሜል- yalemzerfberhe27@gmail.com

I. የኋላ መሬት መረጃ

1. የወላጅ ጾታ	1. እናት 2. አባት
2. እድሜ	1. 18-24 2. 25-39 3. 40 እና ከዚያ በላይ
3. የጋብቻ ሁኔታ	1. ያገባ 2. ያላገባ
4. የመኖሪያ ፈቃድ	1. የከተማ 2. ሩራ
5. የትምህርት ደረጃ	1. ምንም መደበኛ ትምህርት 2. የአንደኛ ደረጃ ትምህርት ቤት 3. ሁለተኛ ደረጃ ትምህርት ቤት 4. ከላጅ እና በላይ
6. ሙያ	1. የቤት እመቤት 2. ገበሬ 3. ተማሪ 4. መንግስት ይቀጥራል። 5. የግል ተቀጣሪ
7. የወላጅ ሆስፒታል ቆይታ	1. ≤ 1 ሳምንት 2. > 1 ሳምንት
8. ሃይማኖት	1. የኦርቶዶክስ ክርስቲያን 2. ሙስሊም 3. ፕሮቴስታንት 4. ሌሎች
9. ቋንቋ	1. አማርኛ

	2. አፋን አሮሞ 3. ትግርኛ 4. ሌላ
የልጅ መረጃ	
1. ጾታ	1. ወንድ 2. ሴት
2. ዕድሜ (አመት)	1. <1 2. 1–4 3. 5–10 4. 11–14
3. ASA አካላዊ ሁኔታ	1. I 2. II
4. የሂደቱ አይነት	1. ከፍተኛ ክወና 2. አነስተኛ አሠራር
5. የአሰራር አጣዳፊነት	1. ተመራጭ 2. ድንገተኛ
6. የማደንዘዣ ጊዜ	1. < 1 ሰዓት 2. 1-2 ሰዓታት 3. > 2 ሰዓታት
7. የማደንዘዣ ቴክኒክ	1. አጠቃላይ ሰመመን 2. regional anesthesia 3. የተጣመረ RA እና GA
8. የቀድሞ ሰመመን ታሪክ	1. አዎ 2. አይ

II SATISFACTIN የመለኪያ መጠይቆች

መመሪያ፡ እባክትን በትክክል ከሚያንፀባርቁ አማራጮች መካከል አንድ መልስ ይስጡ

በእያንዳንዱ መግለጫ ላይ ይመልከቱ. አማራጭ መልሶች የሚከተሉት ናቸው።

1. = በጣም አልስማማም 3. = ገለልተኛ 5. = በጣም እስማማለሁ

2. = አልስማማም 4. = እስማማለሁ

1	የዶዝ መጠን የማደንዘዣ ቡድን ከልጁ ቀዶ ጥገና በፊት ሁሉንም ጥያቄዎችዎን መለስ	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣም እስማማለሁ
2	በማደንዘዣው በቀረበው የመረጃ መጠን ረክተዋል? ቡድን?	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣም እስማማለሁ
3	በሰመመን ሰመመን ሰጪ ቡድን የተሰጠዎት መረጃ ለመረዳት የሚቻል ነበር?	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ

		4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
4	የማደንዘዣ ቡድኑ ልጅዎ ምን ሊሰማው እንደሚችል አብራራልዎ በአካል እና በስሜታዊነት.	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
5	ልጅዎ እንቅልፍ የወሰደበት እና ከማደንዘዣ የነቃበት መንገድ ረከተዋል?	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
6	የልጅዎ ህመም በደንብ ቁጥጥር የተደረገበት እንደሆነ ተሰምቷችኋል?	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
7	የልጅዎ ማቅለሽለሽ እና ማስታወክ በደንብ ቁጥጥር እንደተደረገበት ተሰምቷችኋል?	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
8	የማደንዘዣ ቡድን ጎበኘ ልጃችሁ በግልጽ ይለጥፋል	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
	የማደንዘዣ ቡድን ለልጅዎ በሙያዊ እና በአክብሮት	1. በጣም አልስማማም

	ባህሪ አሳይቷል ብለው ያስባሉ?	2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
10	ያንን ታምናለህ በማደንዘዣ ቡድን የሕፃናት ግላዊነት በማንኛውም ጊዜ ይከበር ነበር።	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
11	ያንን ታምናለህ የማደንዘዣ ቡድኑ የልጅዎን እንክብካቤ በተመለከተ ለርስዎ ስጋት ትኩረት ሰጥቷል።	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
12	በማደንዘዣ ቡድን ለልጅዎ በሚደረግለት እንክብካቤ ረክተዋል?	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
13	ማደንዘዣ ባለሙያው እና በልጅዎ እንክብካቤ ውስጥ ያለው ሚና ማን እንደሆነ ያውቃሉ	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጠንካራ ሁኔታ አልስማማም
14	ይህንን የማደንዘዣ ቡድን ለቤተሰብዎ ለሌሎች ሰዎች ይመክራሉ	1. በጣም አልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ

		5. በጠንካራ ሁኔታ አልሰማማም
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