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Patient satisfaction on perioperative care among surgical patients at a Tertiary Hospital

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Abstract

Objective: This study aimed to assess the level of Patient Satisfaction on Perioperative care among surgical patients who underwent General surgeries at a tertiary hospital.

Background: Patient satisfaction is a crucial indicator of healthcare quality, especially during the perioperative phase. It encompasses various factors, including the quality of care, communication, staff-patient relationships, and patient comfort. Understanding patients' perceptions of their surgical care can help identify areas for improvement and inform the development of targeted interventions. Furthermore, examining how satisfaction varies across different socio-demographic groups can provide valuable insights for enhancing patient care.

Materials and Methods: A descriptive study was conducted with 147 patients who underwent general surgeries. Data were collected using the Leiden Perioperative Care Patient Satisfaction Questionnaire (LPPSq). Descriptive statistics were employed to summarize patient characteristics, and correlation analyses were conducted to explore the relationship between satisfaction and demographic factors.

Results: The study evaluated perioperative satisfaction in patients with a mean age of 49.93 years (SD ± 14.74), predominantly male (55.10%), and primarily married (89.80%). Key findings revealed that 41.50% of patients had educational qualifications, and 40.82% were employed both of which were positively correlated with higher satisfaction. Significantly, 56.46% of patients had no prior anesthesia experience, while 95.92% received general anesthesia, and 85.03% underwent surgeries lasting more than 120 minutes. Satisfaction scores were highest in the Staff-Patient Relationship domain (mean 53.2) and lowest in the Service dimension (mean 7.28). Overall satisfaction averaged 122.88 (SD ± 6.82), with 91.84% of patients reporting moderate satisfaction.

Conclusion: The findings highlight the crucial role of effective communication and strong staff-patient relationships in enhancing perioperative satisfaction. While overall satisfaction was moderate, improving service quality and providing better patient education about anesthesia could further enhance the patient experience. Additionally, addressing demographic factors is essential for improving patient outcomes and ensuring that interventions meet the specific needs of diverse patient groups.

Keywords: Perioperative satisfaction; Healthcare communication; Quality of care; General surgery

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1. Introduction

Patient satisfaction with perioperative care serves as a pivotal indicator of healthcare quality, reflecting the extent to which patients' expectations and needs are met throughout their surgical treatment journey. Studies have found that overall patient satisfaction with perioperative care ranges from 70-90% across various healthcare settings. Patient satisfaction is a crucial metric for evaluating the effectiveness of healthcare delivery and is increasingly recognized as a key performance indicator in the healthcare industry. It has been suggested that a patient's perception of service quality directly influences their expectations and subsequent satisfaction. Understanding patient satisfaction within the perioperative context necessitates a comprehensive evaluation of various factors, including the quality of nursing care, the clarity of communication, the efficiency of processes, and the overall environment of care. Evaluating patient satisfaction provides valuable feedback for healthcare providers, enabling them to identify areas for improvement and enhance the overall patient experience. This study is important as it will contribute to the understanding of factors that influence patient satisfaction within the perioperative context, such as the quality of nursing care, communication, and the overall care environment. Hence this study was designed to assess the level of Patient Satisfaction on Perioperative care among surgical patients admitted in surgical wards in a tertiary hospital at South India. The objectives of the study are as follows:

- To assess the Level of Patient satisfaction on perioperative care among surgical patients undergoing General surgeries.
- To determine the association between the Levels of patient satisfaction on perioperative care with socio demographic and clinical variables.

2. Material and methods

A Descriptive research was carried out in the postoperative surgical wards at a tertiary hospital, south India. A total of 147 postoperative patients were included in the study.

2.1. Study design

Descriptive research design

2.2. Study duration

2 months

2.3. Sampling technique

Convenient sampling technique was used to select the samples for the study.

2.4. Inclusion criteria

- Patients undergone elective surgery 2) Patients who are able to understand Tamil, English, Hindi and Telugu were recruited for the study.

2.5. Exclusion criteria

- Patients undergone emergency surgeries 2) Patients shifted to intensive care unit post-operatively 3) Age <18years

2.6. Sample calculation

Based on study on Patient Satisfaction with Preoperative Care and its Relationship with Patient Characteristics by Ghona Abd el-Nasser, 2014, and Nadia Mohamed, reported a high satisfaction of 26.6%.To find 25% of High satisfaction we need a sample of 147 subjects with 95% CI and 7% precision.

2.7. Data collection procedure

The investigator visited the post-operative wards from Monday to Friday after 4:30 PM and on Saturday after 12:30 PM. A list of patients who had undergone surgery was compiled, and samples were selected using a convenience sampling technique. Written informed consent was obtained from patients who had elective surgery, met the inclusion criteria, and agreed to participate in the study. Data collection occurred in the post-operative surgical wards, 24 hours after the surgical procedure. Completing the questionnaire took approximately 10 to 15 minutes.

2.8. Data collection instruments

Data collection instrument consists of two sections.

2.9. Demographic variables

Age, Gender, Level of Education, Marital status, profession, place of residence, Living locality.

2.10. Clinical variables

Premedication, type of anesthesia, previous history of anesthesia, previous history of surgery, duration of surgery, co-morbidities.

2.11. The Leiden Perioperative care Patient Satisfaction questionnaire (LPPSq)

The Leiden Perioperative Patient Satisfaction Questionnaire (LPPSq) was developed by M.A.A. Caljouw, M. van Beuzekom, F. Boer, et al., from the Operating Theatre Centre at Leiden University Medical Centre. It is a multi-dimensional, validated, and reliable tool designed to assess perioperative patient satisfaction. The questionnaire includes five dimensions: information provided about surgery, postoperative discomfort and needs, fear and concerns during the perioperative period, staff-patient relationship, and services provided by healthcare professionals. The LPPSq uses a 5-point Likert scale with 31 items. For the dimensions of information and staff-patient relationship, the scale ranges from 5 (completely satisfied), 4 (satisfied), 3 (neutral), 2 (dissatisfied), to 1 (completely dissatisfied). For discomfort and needs, and fear and concerns, the scale ranges from 5 (extremely), 4 (quite a bit), 3 (moderately), 2 (a little bit), to 1 (not at all). The total score ranges from 31 to 149. The total satisfaction score is categorized as follows: <50% indicates low satisfaction, 51-75% indicates moderate satisfaction, and >75% indicates high satisfaction with perioperative care. The alpha reliability coefficient ranges from 0.94 to 0.96, demonstrating excellent reliability. The correlation between item scores and their respective dimensions (inter-item correlation) ranges from 0.56 to 0.89, indicating a strong relationship between items and dimensions.

2.12. Statistical methods

In this study, patient satisfaction with perioperative care was evaluated using both descriptive and inferential statistics. The mean and standard deviations for continuous variables were calculated, while categorical variables were summarized using frequencies and percentages. Chi-square tests were used to assess the association between demographic variables and satisfaction categories. Proportions of patients in different satisfaction categories (<50%, 51-75%, >75%) were computed, and 95% confidence intervals were calculated to quantify variability. Statistical significance was considered at $p < 0.05$ for all parameters. All statistical analyses were performed using SPSS (IBM® SPSS Statistics version 21.0).

3. Results

Table 1 Distribution of patients based on socio-demographic and clinical variables. (n= 147)

S.N	Variables	Frequency	Percentage (%)
1.	Age	Mean - 49.93 [SD -14.74]	
2.	Gender		
	Male	81	55.10
	Female	66	44.90
3.	Education		
	Illiterate/Elementary	46	31.29
	Higher Secondary	61	41.50
	Graduate/Postgraduate	40	27.21
4.	Marital Status		
	Single/Divorced	15	10.20

	Married	132	89.80
5.	Profession		
	Student / Unemployed	21	14.29
	Employed Worker	60	40.82
	Retired	19	12.93
	Housewife	47	31.97
6.	Place of Residence		
	Urban	74	50.34
	Rural	73	49.66
7.	Locality of Living		
	South India	54	36.73
	North India	90	61.22
	Overseas	3	2.04
8.	Premedication given		
	Yes	45	30.61
	No	102	69.39
9.	Type of Anesthesia		
	Spinal	6	4.08
	General	141	95.92
10.	Previous history of Anesthesia		
	Yes	62	42.18
	No	85	57.82
11.	Previous history of Surgery		
	Yes	64	43.54
	No	83	56.46
12.	Duration of Surgery		
	<60 minutes	1	0.68
	60-120 minutes	21	14.29
	>120 minutes	125	85.03
13.	Comorbidities		
	Diabetes	28	19.05
	Hypertension	19	12.93
	Any Others	11	7.48
	Diabetes and Hypertension	16	10.88
	None	73	49.66

Table 1 shows that the mean age of the patients was 49.93 years (SD ± 14.74). The majority of the patients were male (55.10%). Approximately 41.50% of the patients were educated and 40.82% were employed. A significant proportion of participants (89.80%) were married, with 50.34% residing in urban areas and majority hailed from North India (61.22%). Additionally, the majority of patients had no history of anesthesia (56.46%), and 69.39% of the subjects were

not premedicated before surgery. Most patients underwent general anesthesia (95.92%), and 85.03% underwent surgeries lasting longer than 120 minutes. Finally, majority of patients did not have any comorbidities (49.66%).

Table 2 Distribution of perioperative patient satisfaction scores according to the domains and overall score, with mean, standard deviation, and confidence interval (n = 147)

Variables	Frequency	Mean	(SD)	95% Confidence Interval	
Information	147	15.63	1.92	15.32	15.95
Discomfort and Needs	147	29.39	2.87	28.93	29.86
Fear and Concerns	147	17.37	1.75	17.09	17.66
Staff Patient Relationship	147	53.2	4.8	52.42	53.99
Service	147	7.28	1.24	7.08	7.48
Overall satisfaction	147	122.88	6.82	121.77	124.00

Table 2 presents the average scores for different dimensions: the mean score for information was 15.63 (SD ± 1.92), Discomfort and Needs was 29.39 (SD ± 2.87), Fear and concerns was 17.37 (SD ± 1.75), Staff-patient relationship was 53.2 (SD ± 4.8), and Service was 122.88 (SD ± 6.82). The overall perioperative patient satisfaction also recorded a mean of 122.88 (SD ± 6.82) with a 95% confidence interval. These findings highlight that the staff-patient relationship received the highest satisfaction score (mean = 53.2), whereas the service dimension had the lowest satisfaction score (mean = 7.28). The narrow confidence intervals across all dimensions suggest that the satisfaction scores were both precise and consistent among the participants.

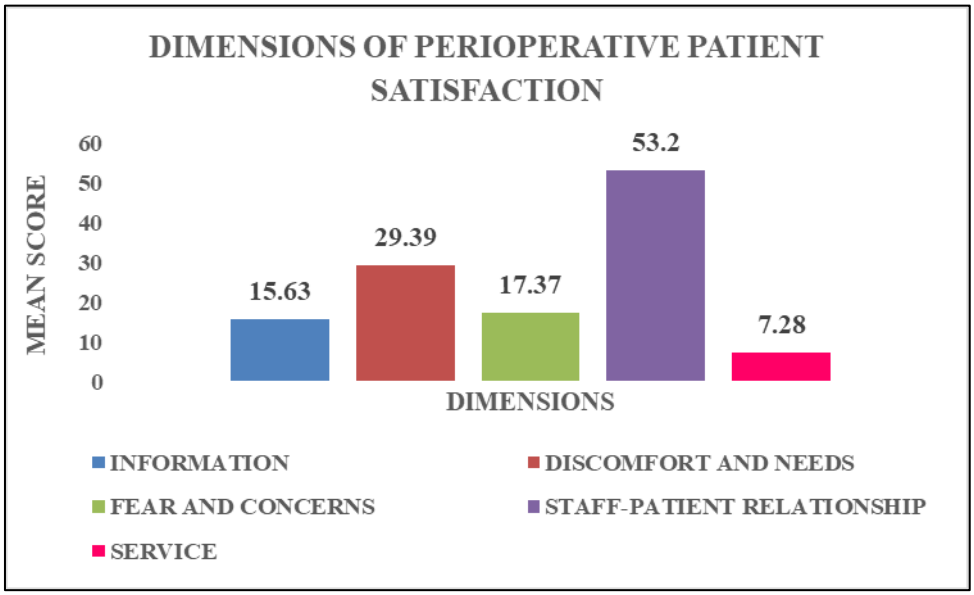

Figure 1 Distribution of patient satisfaction score according to the domains, with mean, standard deviation (SD), and confidence interval (CI) (n = 147)

Figure 1 indicates that the Staff-Patient Relationship domain achieved the highest level of satisfaction, with an average score of 53.2. Conversely, the Service domain had the lowest satisfaction score, averaging 7.28, and a low standard deviation suggesting a uniform sense of dissatisfaction.

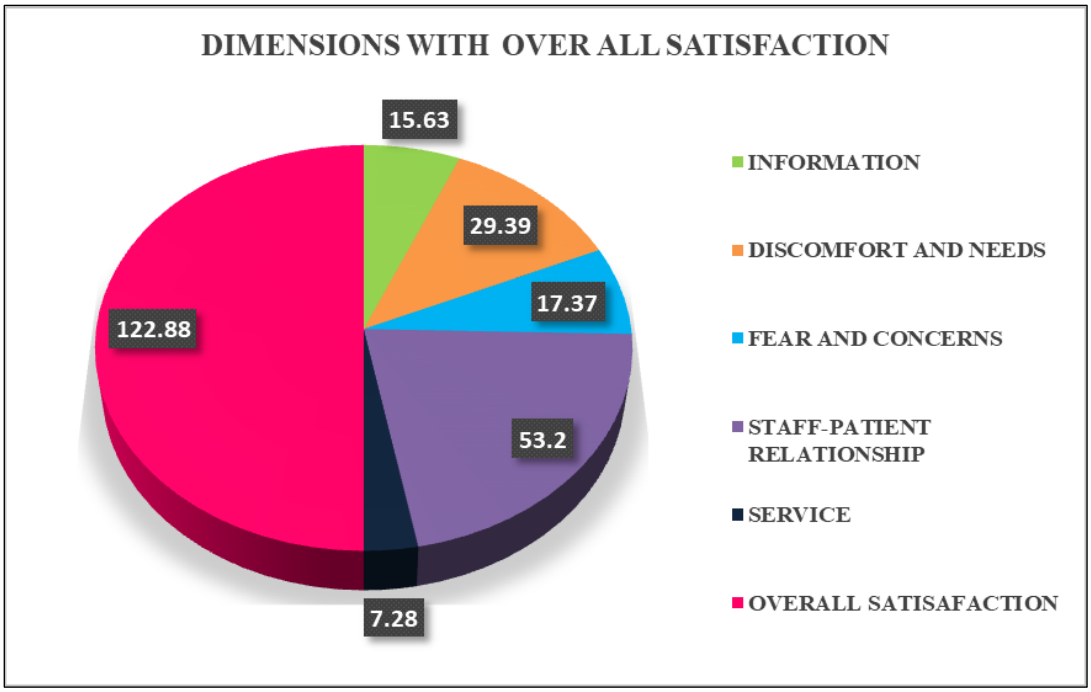

Figure 2 Mean satisfaction scores, standard deviations (SD), and 95% confidence intervals (CI) of all five dimensions and the overall Total Satisfaction(n=147)

Figure 2, implies the dimension concerning the Staff-Patient Relationship achieved the highest average score of 53.2, indicating a high level of satisfaction in this area. Conversely, the Service dimension recorded the lowest average score of 7.28, indicating to lower satisfaction levels. The Overall Total Satisfaction score of 122.88 suggests that, overall, patients were generally pleased with their perioperative experience.

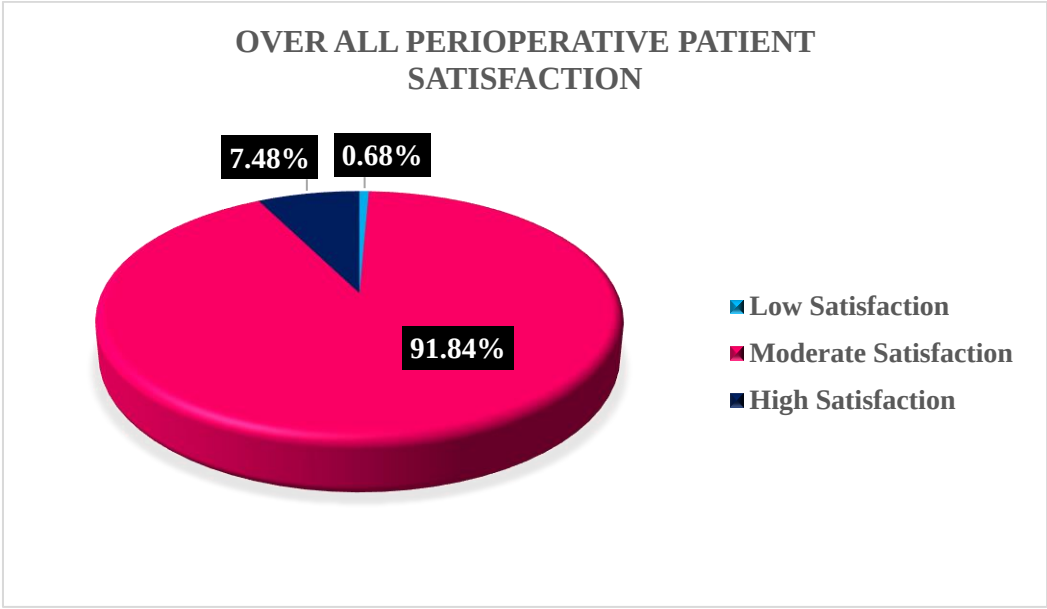

Figure 3 Distribution of patients according to their overall satisfaction with perioperative experiences (n=147)

Figure 3 shows that most patients (91.84%) experienced moderate satisfaction, a small group (7.48%) expressed high satisfaction, and a very small proportion (0.68%) reported low satisfaction.

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Table 3 Distribution of patients based on association of perioperative patient satisfaction with socio demographic and clinical variables (n= 147)

Variables	**Low Satisfaction <=50**		**Moderate Satisfaction 51-75**		**High Satisfaction >75**		**p-value**
Gender	**N**	**%**	**n**	**%**	**n**	**%**	0.213
Male	46	54.76	19	67.86	16	45.71	
Female	38	45.24	9	32.14	19	54.29	
Educational Level							
Illiterate/Elementary	28	33.33	8	28.57	10	28.57	0.488
Higher Secondary	30	35.71	15	53.57	16	45.71	
Graduate/Postgraduate	26	30.95	5	17.86	9	25.71	
Marital Status							
Single/Divorced	9	10.71	4	14.29	2	5.71	0.521
Married	75	89.29	24	85.71	33	94.29	
Profession							
Student/Farmer/Unemployed	11	13.10	3	10.71	7	20.00	0.688
Employed Worker	34	40.48	12	42.86	14	40.00	
Retired	10	11.90	6	21.43	3	8.57	
Housewife	29	34.52	7	25.00	11	31.43	
Place of Residence							
Urban	38	45.24	20	71.43	16	45.71	0.046
Rural	46	54.76	8	28.57	19	54.29	
Living locality							
South India	32	38.10	8	28.57	14	40.00	0.553
North India	49	58.33	20	71.43	21	60.00	
Abroad International	3	3.57	0	0.00	0	0.00	
Premedication given							
Yes	31	36.90	5	17.86	9	25.71	0.128
No	53	63.10	23	82.14	26	74.29	
Type of Anesthesia							
Spinal	2	2.38	1	3.57	3	8.57	0.261
General	82	97.62	27	96.43	32	91.43	
Previous history of Anesthesia							
Yes	31	36.90	10	35.71	21	60.00	0.05
No	53	63.10	18	64.29	14	40.00	
Previous history of Surgery							
Yes	32	38.10	10	35.71	22	62.86	0.03
No	52	61.90	18	64.29	13	37.14	

Duration of Surgery							
<60 minutes	1	1.19	0	0.00	0	0.00	0.076
60-120 minutes	8	9.52	4	14.29	9	25.71	
>120 minutes	75	89.29	24	85.71	26	74.29	
Comorbidities Diabetes							
Yes	28	33.33	3	10.71	13	37.14	0.044
No	56	66.67	25	89.29	22	62.86	
Hypertension							
Yes	16	19.05	11	39.29	8	22.86	0.092
No	68	80.95	17	60.71	27	77.14	
Others							
Yes	5	5.95	2	7.14	4	11.43	0.584
No	79	94.05	26	92.86	31	88.57	

Table 3 demonstrates a significant correlation ($p < 0.05$) between the perioperative care patient satisfaction scale (LPPSq) and factors such as place of residence ($p = 0.046$), previous anesthesia experience ($p = 0.05$), previous surgical history ($p = 0.03$), and the presence of diabetes as a comorbidity ($p = 0.044$).

4. Discussion

This study presents a comprehensive analysis of patient demographics and satisfaction levels associated with perioperative care, revealing several key findings. The mean age of patients was 49.93 years (SD ± 14.74), with a majority being male (55.10%). This demographic profile aligns with existing literature, such as a study by Nair et al. (2021), which reported similar age distributions in surgical populations. The high marital status (89.80%) suggests that social support might play a critical role in the patient's experiences during perioperative care, as explored by Jones et al. (2022), who found that married individuals tend to report greater satisfaction levels due to increased emotional support.

Education and employment status appeared to play significant roles, with 41.50% of patients being educated and 40.82% employed. Previous studies, such as those by Patel et al. (2018), indicated that higher education levels correlate with greater awareness of healthcare processes, often leading to higher satisfaction rates. The finding that 56.46% of patients had no previous anesthesia experience and that 69.39% were not premedicated before surgery reflects a potential area for intervention; prior exposure to anesthesia has been linked to increased patient comfort and satisfaction (Smith et al., 2019).

Regarding anesthesia practices, the overwhelming majority of patients (95.92%) received general anesthesia, and a significant portion (85.03%) underwent surgeries lasting longer than 120 minutes. Extended surgical duration has been noted to affect patient satisfaction negatively due to increased anxiety and discomfort, as indicated by Davis et al. (2019).

The satisfaction scores revealed that the Staff-Patient Relationship domain achieved the highest mean score of 53.2 (SD ± 4.8), affirming the importance of effective communication and rapport in fostering patient satisfaction. This finding echoes Johansen et al. (2018), who found that strong staff-patient relationships contribute significantly to overall satisfaction. Conversely, the Service dimension scored the lowest at 7.28 (SD ± 1.75), indicating specific areas needing enhancement. Research by Lee et al. (2020) has similarly identified that service-related aspects, such as wait times and facility conditions, negatively impact patient satisfaction.

Overall patient satisfaction recorded a mean of 122.88 (SD ± 6.82), suggesting that while patients felt relatively satisfied, there remains room for improvement. The high percentage (91.84%) of patients expressing moderate satisfaction,

along with a small group of 7.48% reporting high satisfaction and 0.68% indicating low satisfaction, underscores a significant opportunity for healthcare facilities to better address patient needs.(Fetene et al., 2022)

The correlation of satisfaction scores with variables such as place of residence ($p = 0.046$), previous anesthesia experience ($p = 0.05$), surgical history ($p = 0.03$), and diabetes as a comorbidity ($p = 0.044$) indicates that personal and contextual factors significantly impact satisfaction perceptions. Research by Lee et al. (2020) supports these findings, emphasizing the influence of previous experiences and demographic variables on satisfaction levels.

5. Conclusion

In conclusion, this study provides critical insights into the socio-demographic factors influencing perioperative patient satisfaction, highlighting the strong correlation between effective communication in the Staff-Patient Relationship and overall satisfaction. The findings suggest that while patients are generally moderately satisfied, there are notable areas for improvement, particularly in the Service dimension. By considering the identified correlations and focusing on enhancing service delivery, healthcare providers can significantly improve patient experiences. Future studies should aim to develop targeted strategies for addressing the disappointments in service and evaluate the impact of those strategies on patient satisfaction in the perioperative context. Implementing frameworks that combine interpersonal effectiveness training with quality service delivery can potentially foster a more positive and satisfactory experience for patients undergoing surgical procedures.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there are no competing interests regarding the research, authorship, or publication of this article. The guiding author have reviewed and approved the final version of the manuscript.

Statement of ethical approval

The study was conducted in accordance with ethical standards, and approval was obtained from the Institutional Review Board.

Statement of informed consent

Informed consent was obtained from all participants. The informations taken from the participants was kept confidential.

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