

Parental Satisfaction with Care and Support in Neonatal Care Units of Public Hospitals of Nepal

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Abstract

Introduction: Parental satisfaction is one of the indicators of quality care. An understanding of the satisfying areas would help to identify and prioritize care and support areas for infants and parents. Therefore, this study was conducted to find out the parental satisfaction with care and support in neonatal care units (NCUs).

Methods: Cross-sectional descriptive study was conducted in NCUs of five selected public hospitals. The study was conducted among 305 parents of preterm infants (PTIs). After obtaining ethical approval, in-person interviews were conducted with parents using a satisfaction questionnaire. Both descriptive and inferential statistics were used for data analysis.

Results: Parents were moderately satisfied with care and support with a median score and interquartile range of 3.4 (3.1- 3.8). They were highly satisfied with the infant care and least satisfied with the attachment and care guidance support with median scores of 4.0 (3.5 - 4.0) and 3.1 (2.6 - 3.8) respectively. Parental satisfaction was significantly associated with parental age, gestational age at birth, and birth weight (P value < 0.05).

Conclusions: Parents are moderately satisfied with the care and support received in the NCUs. Their satisfaction is lower with the support for attachment and care guidance. In addition to competent and affectionate care to PTIs, parental support for attachment, guidance, and involvement in care need to be considered by NCU personnel.

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Introduction

Satisfaction is the reflection of the consumer's judgment about the quality of care received. In today's consumer-driven society, measuring care satisfaction has become integral to the evaluation of health care services.^{1,2} In the situation of NCUs, infants can't express their health needs and satisfaction. On the other side, WHO (2019) has advocated for respectful care for both the infants and the families in NCUs and emphasized parental support for involvement in infant care.³ Therefore, the opinions and satisfaction of parents need to be considered.⁴

Previous studies suggested that the most important determinants of parents' satisfaction were involvement in parental roles, good communication, information provision, emotional support, and interpersonal relationship with the health care team.⁵⁻⁹ Some studies indicated parental dissatisfaction with less than optimal NCU care, inconsistencies in practices, unfulfilled expectations for infant-parent bonding and care guidance, and compromised satisfaction.^{1,7,9}

An understanding of satisfying areas would help to identify and prioritize care areas. Satisfaction with provided care enhances care acceptance, trusting relationship with

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healthcare providers, involvement in infant care, and better health outcomes.¹⁻³ Therefore, this study was conducted to find out the parental satisfaction to care and support in NCUs. So, findings might be useful for improving the care and parental support in NCUs in the coming days.

Methods

The descriptive cross-sectional study was part of the sequential mixed-method study. The study was conducted in NCUs of the five randomly selected public hospitals of Nepal having both level II and level III neonatal care services. The population of the study was the parents of the PTIs admitted in NCU. All the parents of PTIs admitted in NCUs for > four days and willing to participate were included in the study until the fulfillment of the sample size (305). Ethical approval for the study was obtained from the Nepal Health Research Council (Ref No. 2804/2019). Administrative permission was obtained from the study settings. After taking written informed consent, face to face interview was conducted with the parents by the principal investigator and three trained enumerators. The interview was done on the day or one day before discharge. The data collection instrument included socio-demographic and obstetric variables and a parental satisfaction rating scale. The satisfaction scale was developed based on available literature.^{4,10-12} and in-depth interview findings from parents. The instrument was reviewed by the pediatric nursing faculties and research experts. The translation and back-translation processes were done. Pre-tested Nepali version satisfaction scale had 22 items covering four domains: communication and emotional support, informational support, baby care and support for attachment, guidance, and support. The Chronbach alpha scores were > 0.7 for the items and 0.8 for the overall scale. The parents responded to each item on a five-point Likert type scale with ratings from very dissatisfied '1' to very satisfied '5'. Descriptive and inferential statistics were used to analyze the data. Non-parametric tests like the Chi-square test and logistic regression were used as the data were non-normally distributed.

Results

Findings from the 305 parents (202 mothers and 103 fathers) show that their ages ranged from 17 - 50 years with mean age 27.6 ± 5.6 years. The socio-demographic and obstetric characteristics of the study population and the characteristics of PTI are shown in Tables 1 and 2.

Table 1. Socio-demographic and Obstetric Characteristics of the Parents

N = 305

Variables	Number	Percent
Age (in completed years)		
20 >	28	9.2
30 - 21	185	60.7
40 - 31	82	26.9
40 <	10	3.2
Mean \pm SD: 27.6 \pm 5.6 years, range 17 - 50 years		
Educational status		
Can't read and write	22	7.2
Primary level	52	17.1
Secondary level	126	41.3
Higher secondary level	53	17.4
University level	52	17.0
Occupation		
Homemakers	122	40.0
Service holder	61	20.0
Business	42	13.8
Agriculture	42	13.8
Daily wages earner	18	5.9
Others (Migrant employees, entrepreneurship)	20	6.5
Ethnicity		
Brahmin / Chhetri	147	48.2
Janajati	103	33.8
Madhesi	25	8.2
Dalit	27	8.9
Muslim	3	1.0
Types of Family		
Nuclear	137	44.9
Joint	168	55.1
Sufficiency of Family Income		
For < 1 year	83	27.2
For 1 year	222	72.8
Parity		
Primi Para	162	53.1
Second Para	123	40.3
Grand multi para	20	6.6
Number of Antenatal Clinic Visit		
\leq 3 visits	99	32.5
\geq 4 visits	206	67.5

Table 2. Characteristics of Preterm Infants

N = 305

Characteristics	Number	Percent
Gestational Age at Birth		
weeks 28	8	2.5
weeks 32 - 29	96	31.5
weeks 33-36	201	65.9
Mean ± SD: 33±2.1 weeks, range: 26 to 36 weeks		
Mode of Delivery		
Un-assisted vaginal	156	51.1
Assisted vaginal	8	2.6
Caesarean Section	141	46.2
Birth Weight		
grams 1000	7	2.0
grams 1500 - 1100	98	32.1
grams 2000 - 1600	142	46.6
grams 2100 <	58	19.0
Mean ± SD: 1742 ± 350 grams, range: 950 - 2450 grams		
Duration of Admission in Neonatal Care Units		
days 7	95	31.1
days 14 - 8	96	31.5
days 21 - 15	63	20.7
days 28 - 22	25	8.2
days 29	26	8.5
Median(IQR): 12 (7.0-17.5) days, range: 4 to 63 days		

Table 3. Parents' Satisfaction with Care and Support Received in NCU's

N = 305

Items	(%) No	Med (IQR)
Communication and Emotional Support		
Polite and friendly behavior of nurses	(64.3) 196	(3-4) 4
Opportunity created to ask question(s)	(56.7) 173	(3-4) 4
Answer received for the question(s)	(62.7) 190	(3-4) 4
Concern for parents' general wellbeing	(30.5) 93	(2-4) 3
Consolation for worries and concerns	(44.3) 135	(3-4) 3
Informational Support		
Information received about the unit rule, facilities	(57.0) 174	(3-4) 4
Informed about infant's condition and progress	(76.7) 234	(4-4) 4
Explanation about the new procedure(s)	(74.8) 214	(3-4) 4
Information about necessary infant care	(60.0) 183	(3-4) 4
Informed about the danger signs	(41.0) 125	(3-4) 3
Explanation about follow up visit	(68.5) 209	(3-4) 4
Care Provided to the Infant		
Care provided to the infant	(67.5) 206	(3-4) 4
Care provided with love and affection	(62.0) 189	(3-4) 4

Immediate action taken for the infant's problems	(81.3) 248	(4-4) 4
Concern shown for the infant's comfort and well-being	(84.6) 258	(4-4) 4
Support for Attachment and Care Guidance		(2.6-3.8) 3.1
Opportunity to visit the infant	(54.4) 166	(3-4) 4
Opportunity to be close with the infant	(43.6) 133	(2-4) 3
EBM feeding or breastfeeding	(51.1) 156	(3-4) 4
Kangaroo mother care (KMC) for the infant	(48.5) 148	(2-4) 4
Hygiene and general care of the infant	(22.3) 68	(2-3) 2
Involvement in the infant care	(61.6) 188	(3-4) 4
Satisfaction to the care and support	(96.1) 293	(3-4) 4
Overall median score		(3.1-3.8) 3.4

Measured in 1-5 scale (very dissatisfied -'1' to very satisfied '5'), total score 110, Scores 1-3= 'no satisfaction', 4-5= 'satisfaction'; Med (IQR): Median score (Interquartile range)

Parents satisfaction regarding care and support received in NCU's is depicted in Tables 3 and 4. The association between parental satisfaction and different variables of the parents and PTI is shown in Table 5.

Table 4. Levels of Parental Satisfaction regarding Care and Support in NCU's

N = 305

*Levels	Number	Percent	CI 95%
Low level satisfaction	132	43.3	48.9 - 37.4
High level satisfaction	173	56.7	62.6 - 51.1

* Level of satisfaction based on median score (3.4) as a cut-off value

Table 5. Association of Parental Satisfaction with the Selected Variables of the Parents and PTIs

N = 305

Contributing Factors	Satisfaction		OR (95% CI)	P value*
	Low	High		
Parents' Variables				
Parents				
Mothers	93	109	(2.274 - 804.) 1.400	0.181
Fathers	39	64		
Parents' age				
years 27	76	62	(3.866 - 1.527) 2.430	> 0.001
years 28	56	111		
Education				
Up to secondary	63	72	(2.124 - 853.) 1.346	0.287
Higher secondary and above	69	101		
Family Income				
Not enough for a year	40	43	(2.229 - 810.) 1.344	0.300
Enough for a year	92	130		
ANC visit				

Three visits	48	51	(2.109 - 804.) 1.302	0.324
Four visits	86	119		
Parity				
Primi	76	86	(-2.066 831.) 1.310	0.173
Multi	56	87		
Infants' Variables				
Gestational age				
weeks 32	34	70	1.960 (1.194-3.215)	0.007
weeks 33	98	103		
Birth Weight				
1500	35	70	1.858 (1.140 - 3.030)	0.11
1600	97	103		
Duration of Hospitalization				
days 14	82	109	(1.492 - 585.) 934.	905.
days 15	50	64		

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* Chi square p-value significant at < 0.05 level, (2 sided), OR: odds ratio, CI: confidence interval

Discussion

The findings of this study show that parents were satisfied with the general care and support in NCU as the median score (IQR) was 4.0 (3.0 - 4.0). Whereas, they had moderate satisfaction for the overall care and support in NCUs with a median score (IQR) of 3.4 (3.1 - 3.8). Previous studies among 340 parents of NCU admitted PTIs in Vietnam reported near similar satisfaction score (3.6 ± 0.4 out of 5).² Another study among 300 NCU parents in USA revealed a higher satisfaction score 5.70 ± 0.41.¹⁴ Other studies done among NCU parent in Greece and Turkey reported mean parental satisfaction scores 48.7 ± 7.3 (range 23 - 60)¹⁵ and 65.6 ± 20.0 out of 76.¹⁶ Study among 314 parents in Ethiopia revealed satisfaction among.¹⁷ Whereas, a study in India reported parental dissatisfaction towards the traditional system of NCU care.⁷

In this study, parents highest satisfaction was related to care provided to the infant followed by informational support and least satisfied with the support provided for attachment and guidance for infant care with median scores (IQRs) 4.0 (3.5-4.0), 3.6 (3.2 - 4.0) and 3.2 (2.6 - 3.8) respectively. Integrative review and other studies among NCU parents also reported similar findings on parental satisfaction.^{1,7,10,16,18} Parents of PTIs indicated that support for parents-infant attachment, educational and emotional support decreased their stress and empowered parental role which was essential for discharge and home care.^{9,19-23} Parents expressed that NCU staffs' support for infant care in NCU facilitated their infant care confidence in the hospital and after going home.²⁴ Studies among parents of Italy and Ethiopia reported parental higher satisfaction with involvement in the care of their hospitalized infants.^{25,26}

In the study in NCUs of the USA where neonatal care is based on family-centered care, parents' highest satisfaction was for the professional attitude (mean score 5.79), followed by care and treatment to the infant (5.69), care participation (5.65) and informational support (5.61).¹⁴ Another study among 100 mothers of PTIs of a neonatal step-down unit in India indicated their highest satisfaction with the interpersonal relationships with the staff (7.78 out of 8) and lowest satisfaction with the education and guidance (5.4 out of 8).⁹ Present and previous studies signified that parental satisfaction was related to information, communication, and good interpersonal relationship with the health care personnel. There was lower satisfaction regarding received information, guidance, and involvement in PTI care.^{1,9,14,27}

In this study, parents' satisfaction was associated with the age of the parents (p = < 0.001), gestational age of the PTIs (p = 0.007), and birth weight (p = 0.011). In the study by Nguyen et al, parental satisfaction was significantly associated with the occupation, length of stay, and health status of the PTI.⁴ Other studies had reported a significant association of parental satisfaction with different variables like hospitalization duration, type of birth (single/twins), infants' health status, age, gender, educational status and income status of the parents.^{7,13,15-17,27,28}

Although this study has tried to depict the status the parental

satisfaction in NCU, the major limitation of this study is that it was conducted among parents of PTIs with good health outcomes and ready for discharge. The parents were interviewed on the day or day before discharge and this could have also influenced the parents' response.

Conclusions

Parents were moderately satisfied with the care and support in the NCUs. They were highly satisfied with the care provided to their PTIs in NCUs and least satisfied with the support provided for the attachment and guidance for the infant care. Parental satisfaction was significantly associated with the age of the parents, gestational age, and birth weight of the PTIs.

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