

Factors associated with the overall parents' satisfaction on the hospitalization of their neonates in the neonatal unit of CNHU-HKM, Cotonou in 2024

Abstract

Introduction: Patients' satisfaction has undoubtedly become an important indicator for the assessment of the quality of care. In neonatology, parental satisfaction and their experiences become fundamental for the evaluation of clinical practice and the improvement of care in neonates. The aim of our study was to investigate the factors associated with the overall parents' satisfaction on the hospitalization of their neonates in the neonatal unit of CNHU-HKM.

Method: This was a cross-sectional observational study with descriptive and analytical aims. A prospective data collection was carried out over a period of two months (May 1 to June 30, 2024).

Results: A total of 422 parents were surveyed. The overall satisfaction of parents with the care of their children was 82.46%. The majority of parents surveyed (66.35%) were mothers, with an average age of 28.59 ± 5.05 and a primary education level. As for neonates, the majority were male with a sex ratio of 1.49. Parents were highly satisfied with all aspects of the care (score of 3). They were not very satisfied with neonatal care with a score of 2. The caregiver-parent relationship and service delivery was satisfactory with a high score of 3. Factors associated with overall parental satisfaction were the sex, length of stay and clinical condition at admission of the neonate, the age of the parents, the education level of the father and the availability of continuing care.

Conclusion: It is important to improve communication between parents and staff on newborn care and the social aspect.

Keywords: satisfaction, parents, neonate, care

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Introduction

Patients' satisfaction is certainly an important indicator for the assessment of the quality of care.^{1,2} It provides important information for identifying personal performance, improving health intervention systems, organizing future planning and designing strategies for health care.³ In the context of health care, satisfaction is inseparable from the quality of care, which is defined by the World Health Organization as "the fact of providing each patient with the range of diagnostic and therapeutic procedures that will ensure the best health outcome, according to the current state of medical science at the lowest cost for the same result, with the least iatrogenic risk and for the greatest satisfaction in terms of procedures, results and human contact within the health care system".⁴ In neonatology, parental satisfaction and their experiences become fundamental for the evaluation of clinical practice and the improvement of care for neonates. It is an integral component for the reduction of neonatal mortality worldwide.⁵ Many studies have shown that parental satisfaction is effective in improving the quality of neonatal care. The measurement of patients' satisfaction remains an element that is still too neglected by practitioners. This is what motivated the interest in this study. The objective was to investigate the factors associated with the overall parents' satisfaction on the hospitalization of their neonates in the neonatal unit of CNHU-HKM, Cotonou in 2024.

Materials and methods

This was a cross-sectional observational study with a descriptive and analytical aim over the period from May 1 to June 30, 2024. It took place in the neonatal unit of the University Clinic of Pediatrics and Medical Genetics at Hubert Koutoukou MAGA National Teaching Hospital in Cotonou.

The study population consisted of all living neonates, hospitalized in the unit and the parents or carer of neonates hospitalized in the unit during the study period. Any parent/carer of a neonate admitted to the neonatology during the study period, having spent at least 24 hours and having agreed to participate in the study were included. In the presence of two parents or a carer, only one parent was included. In the case of twins, the parent or carer was interviewed only once.

We carried out an exhaustive recruitment, taking into account subjects who met the inclusion criteria during the study period.

Data collection was carried out using a structured questionnaire developed using the Empowerment of Parents in Intensive Care-Neonatology (EMPATHIC-N) questionnaire. This pre-tested questionnaire was digitized in French on the online collection application called Kobotoolbox.

The questionnaire was completed through individual face-to-face and telephone interviews.

Then a review of the medical records was performed to complete the information about the neonates. The dependent variable was the overall parents' satisfaction.

The independent variables were: sociodemographic characteristics of neonates and parents, clinical characteristics of the neonates, quality of reception at admission, information given on neonatal care (doctors and nurses) and the parent-caregiver relationship, services provided.

The fields of study were: the quality of reception, the information given on neonatal care (medical and nursing), the parent-caregiver relationship, the provision of services.

The satisfaction score was calculated from the answers to several questions. (Table 1)

Table 1 LIKERT scale and score correspondence

	Score
Very unsatisfactory	1
Unsatisfactory	2
Satisfactory	3
Very satisfactory	4

LIKERT scale (weighting) was used to calculate the scores, ranging from 1 to 4 when the respondent must choose between very unsatisfactory (1), unsatisfactory (2), satisfactory (3) and very satisfactory (4). Questions with binary variables correspond to the following scores: NO= very unsatisfactory (1) and YES= very satisfactory (4). The calculation of the score for each field of satisfaction studied corresponds to the average rounded down to the nearest unit of the scores obtained from the responses based on the items of each field.

After collection, the completeness and accuracy of the data were verified. Data entry was carried out using KoBoCollect software.

Data analysis was carried out using SPSS version 2021 software.

Statistical associations were made by bivariate analysis between the dependent variable (overall parents' satisfaction) and the clinical characteristics of children, sociodemographic characteristics of neonates and parents. A multivariate logistic regression of the bivariate analysis was performed to look for factors associated with parents' satisfaction. This analysis was carried out using statistical tests such as the Chi-square test or the FISCHER exact test and then matched with odds ratio.

The statistically significant threshold considered was 5% (a p-value <0.05 was considered significant)

Results

A total of 422 parents of hospitalized neonates were included with a response rate of 100%. The overall level of parental satisfaction was 82.46%.

Sociodemographic characteristics of neonates and parents

Sex of neonates

We noted a male predominance with a sex ratio of 1.49.

Relationship of respondents to the neonates

The majority of parents surveyed were mothers (66.35%) and fathers (33.65%).

Parental age

The majority of mothers were aged between 20 and 30 years in 61% of cases. The average age was 28.59 years ± 5.05. The average age of the fathers was 33.03 years ± 3.17. The youngest father was 18 years old and the oldest was 47 years old.

Level of education

As presented in Table 2, the majority of mothers (40.00%) had a primary education level. The majority of fathers had a secondary education level (41.55%).

Table 2 Education level of parents

	Mother		Father		Total
	Size	%	Size	%	%
None	59	21.07	19	13.38	34.45
Primary	112	40	37	26.06	66.06
Secondary	92	32.86	59	41.55	74.41
High	17	6.07	27	19.01	25.08
Total	280	100	142	100	100

Monthly income of parents surveyed

The average monthly income of mothers was estimated at 49,807 FCFA ± 35,733.6. The minimum income per month was 10,000 FCFA and the maximum was 200,000 FCFA. Among the fathers of neonates, the average monthly income was estimated at 94,503 FCFA ± 54,406 with a variation between 15,000 FCFA and 300,000 FCFA.

Availability of health insurance

About eight out of 10 parents surveyed (88.86%) were not covered by health insurance.

Clinical characteristics of neonates

Birth weight

The average birth weight of neonates was 2492.88g ± 693.10 with the extremes of 600g and 3860g. More than half (59.24%) of neonates had a birth weight greater than or equal to 2500g.

Admission method

Approximately seventy-five point eighty-three percent (75.83%) of neonates were transferred from CUGO and 24.17% of them were referred.

Gestational age

The average gestational age of neonates at birth was 35.88 weeks of amenorrhea (WA) ± 3.15 with the extremes of 26 WA and 42 WA. Preterm neonates represented 46.21% of neonates.

Delivery route

Most neonates (65.40%) were delivered by cesarean section.

Clinical condition of neonates

Preterm neonates were predominant (38.15%).

Table 3 shows the distribution of neonates according to their clinical conditions.

Table 3 Distribution of neonates according to their clinical conditions

Clinical condition	Size	%
Healthy neonates	130	30.81
Sick full-term neonates	131	31.04
Preterm neonates	161	38.15
Total	422	100.0

Length of stay

The average length of stay of the neonates in the neonatal unit was 6 days ± 5.52. The minimum length of stay was one day and the maximum duration was 31 days. Approximately one in 3 (32.23%) neonates had a length of stay between one and two days depending on the clinical condition.

Overall satisfaction of parents

Among the 422 parents surveyed, 82.46% were overall satisfied with the care of their children. In this group, mothers of neonates represented 64.94% and fathers 35.06% of parents.

Parents' satisfaction with reception at admission

The parents surveyed were satisfied with all aspects of the reception, in particular the waiting time (98.34%), the cleanliness of the places (99.29%) and the feeling of being welcome (97.39%). An overall satisfaction score of 3 was noted.

Parental satisfaction with neonatal care

Parental satisfaction with neonatal care was 54.00% with an overall satisfaction score of 2. The majority of parents were satisfied with the doctor-parent relationship (88.63%) and the paramedical staff-parent relationship (80.09%). The overall satisfaction score was 3 for the caregiver-parent relationship. Parents' satisfaction with the provision of services had an overall satisfactory score of 3.

In our study, parents were satisfied with the competence of the medical team (90.29%), the availability and the listening ability of the team (72.52%), and the cleanliness of the rooms 98.34%. They were dissatisfied with the cost of services (50.95%).

Neonatal care satisfaction score (medical and nursing)

Parents were generally dissatisfied with neonatal care and the satisfaction score was 2. (Table 4)

Table 4 Neonatal care field score

Neonatal care	Score=2	Satisfaction level
Information given to parents on the child's pathology	Score 2	Unsatisfactory
Probable causes of illness	1	Very unsatisfactory
Clinical manifestation and progression of the disease	1	Very unsatisfactory
Objective of paraclinical tests	4	Very satisfactory
Nature and progress of the paraclinical test	1	Very unsatisfactory
Results of paraclinical tests	1	Very unsatisfactory
Therapeutic modalities	Score = 1	Very unsatisfactory
Information on treatment and its duration	1	Very unsatisfactory
Information on possible change of the treatment initiated	1	Very unsatisfactory
Involvement of parents	Score = 3	Very satisfactory
Information on the evolution of the child's health	1	Very unsatisfactory
Easy access to information regarding the child's pathology	4	Very satisfactory
Person to contact for necessary information on the progression of the child's disease	4	Very satisfactory
Adequate responses to their needs from the caregivers	4	Very satisfactory

Parent-caregiver relationship satisfaction score

Parents were generally satisfied with the parent-caregiver relationship (score of 3).

Factors associated with overall parents' satisfaction

The associated factors were: sex ($p < 0.002$), length of stay ($p < 0.012$), clinical condition of the neonate at admission ($p < 0.003$), age of parents ($p < 0.003$, 05), educational level of fathers ($p < 0.01$) and the availability of care ($p < 0.003$).

In our study, parental satisfaction was higher when the neonate was male. Parents whose neonates had a length of stay of less than 3 days had a higher susceptibility to being satisfied than others who stayed for more days.

Discussion

Our data were in line with those found by Merzougui et al. in 2018 in Türkiye who reported a sex ratio of 1.55 and by Noudamadjo et al. in 2021 in Benin with a sex ratio of 1.38.^{6,7}

This male predominance can be explained by the fact that male subjects are immunologically weaker than female subjects. Parents under 30 years old were three times more likely to be satisfied than those over 30 years.

The majority of mothers (60.71%) were aged between 20 and 30 years. This result is similar to that found by Ali et al. in 2021 in Ethiopia who reported a majority age group of 20 to 30 years (50.00%).⁸ The average age was 28.59 years. This average age corroborates that found by Sileshi et al. in 2023 in Ethiopia who reported an average age of 28.68 years.⁹

Parents covered by health insurance were more likely to be satisfied than their counterparts. Other authors have also made the same observation in Ethiopia and Norway.

Parents who are not educated are more likely to be satisfied than those who are educated. Contrary to the results found by Sileshi et al in Ethiopia in 2022,⁹ who reported that parents with formal education were more satisfied than parents without formal education. The probable reason could be that non-schooling parents may have low knowledge of the hospital, expectations and demand for neonatology services compared to actual practice.

Most neonates (65.40%) were delivered by cesarean section. This result corroborates those found by Gbenou in 2022 in Benin. He also reported that the majority of neonates were delivered by cesarean section (61%).¹⁰ This could be explained by the fact that CNHU-HKM is a national referral hospital and mothers are mostly referred for complicated pregnancies.

The majority (66.35%) of the parents surveyed were mothers. This result is similar to that observed by Ali et al. which was 66.00% in 2021 in North-West Ethiopia.⁸ This high response rate by women in this study could be explained by the fact that mothers are more present in hospitals and more involved in the care of neonates, particularly in developing countries.

The majority of parents were satisfied with the doctor-parent relationship (88.63%) and the paramedical worker-parent relationship (80.09%). The overall satisfaction score was estimated at 3 for the caregiver-parent relationship. Gbidaoui et al. also reported a high level of satisfaction with the caregiver-parent relationship in a study carried out in Tunisia in 2013.¹¹ This high satisfaction rate could be explained by a desire of the health staff to establish a good relationship

with parents in order to facilitate their adherence to the care of their children.

Parental satisfaction with service provision had a satisfactory score of 3. High levels of satisfaction have also been observed in other studies.^{12,13} In our study, parents were satisfied with the competence of the medical team, the availability and listening ability of health workers, the cleanliness of the rooms and the water supply. They were dissatisfied with the cost of services (50.95%). Parental dissatisfaction with the cost of services could be linked to the low socio-economic level of parents. It is true that CNHU-HKM provides them with a package of 15,000 FCFA, giving them the right to three paraclinical tests decided by the hospital, only one day of hospitalization and a small care kit which is often not available. But this is not enough to cover first care. Sometimes, due to a lack of financial means to cover hospitalization costs, some mothers are forced to stay in the hospital for several more days after their child is discharged. This further encourages the occurrence of other diseases. It is therefore important to make a lot of effort to put in place a structure for the social aspect of parents and also to reduce the costs of hospital services, especially for disadvantaged social groups.

Conclusion

It is important to improve communication between parents and staff on newborn care and the social aspect.

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None.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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