



Proceeding Paper

Parental Satisfaction in Short-Stay Pediatric Emergency Unit: A Cross-Sectional, Descriptive and Observational Study [†]

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Abstract

This study evaluated parental satisfaction with nursing care in a pediatric emergency department short-stay unit. Using the Citizen Satisfaction with Nursing Care Scale, 205 parents of hospitalized children participated in a descriptive, cross-sectional study. Results showed consistently high satisfaction, regardless of parental sociodemographic characteristics. While parents of newborns and employed parents showed slightly higher satisfaction, differences were not statistically significant. These trends suggest areas for further qualitative research to better understand parental expectations. The findings highlight the importance of ongoing evaluation and structured feedback to maintain high-quality, responsive nursing care in pediatric emergency settings.

Keywords: parental satisfaction; hospitals; pediatric; nursing care; child; hospitalized



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1. Introduction

Customer satisfaction is a key indicator of healthcare quality, reflecting the extent to which services meet patient and family expectations [1]. Within hospital settings, satisfaction with nursing care plays a pivotal role in shaping overall satisfaction with the hospital experience, representing the most influential dimension [2]. High levels of satisfaction are closely associated with improved adherence to treatment and care plans, as well as increased likelihood of patients and families recommending or returning to the healthcare facility—making satisfaction a valuable metric for assessing care quality [3]. In the context of nursing care, satisfaction is defined as “a personal opinion that compares perceived needs, expectations of care and experiences of care received in the professional, personal and environmental domains” [4] (p. 28). To capture this multifaceted concept, a variety of validated measurement instruments have been developed and are well-documented in the literature [5]. During a child’s hospital stay, parents—especially mothers—are typically the primary companions and serve as key respondents in satisfaction assessments [6,7]. While parental satisfaction is relevant across all pediatric care settings, including emergency, inpatient, and intensive care units, studies in the national context—particularly within pediatric emergency services remain scarce.

Given this gap, the present study aims to evaluate parental satisfaction with nursing care provided to children admitted to short-stay units in the pediatric emergency department (PED). By identifying how parents perceive nursing care in this specific setting, the study seeks to contribute to the evidence base and support future improvements in clinical practice.

2. Materials and Methods

2.1. Study Design

This is a cross-sectional, descriptive and observational study with a quantitative approach. We adhere to the reporting guidelines of the Enhancing Quality and Transparency of Health Research (EQUATOR) network. More specifically, we followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist. The study was registered on 30 March 2022 at Open Science Framework (<https://osf.io/mabgv/> accessed on 7 May 2025).

2.2. Setting and Participants

The study was applied in a PED at a regional public hospital in Portugal. The PED includes two areas: an external area for initial assessment and care, and an internal short-stay inpatient unit (SSIU), where children remain under observation for up to 48 h. In this setting, each child is continuously accompanied by a caregiver, typically the mother. Data were collected over six months (June to December 2023) from parents or caregivers at the time of discharge. Inclusion criteria were being the primary companion during the child's stay in the SSIU, sufficient proficiency in written and spoken Portuguese, and informed consent to participate.

2.3. Variables and Measurement

Independent variables included socio-demographic variables regarding the children (sex, age, triage wristband color, length of stay) and the carer (sex, age, educational level, employment status—employed/unemployed—and occupational class according to the National Classification of Occupations). Dependent variables included satisfaction with nursing care measured through an instrument entitled Citizen Satisfaction with Nursing Care Scale. This scale was originally designed to be applied in primary care setting; however, it has already been adapted and validated to be applied to parents of hospitalized children [8]. It includes two subscales: Nursing Care Experiences ([NCE] 28 items rated on a seven-item Likert scale) and Opinions on Nursing Care ([ONC] 19 items rated on a five-item Likert scale). To test reliability, we assessed internal consistency through Cronbach's alpha coefficients and obtained values of 0.979 and 0.980, respectively.

2.4. Study Size and Bias

A convenience sampling method was used. While this approach facilitated access to participants, it may introduce selection bias and limit generalizability. To minimize researcher bias, the team was divided: one subgroup administered the data collection, while another conducted the statistical analysis. This separation aimed to enhance objectivity and reduce the influence of researcher expectations on data interpretation.

2.5. Quantitative Variables and Statistical Methods

The data were organized and analyzed using IBM SPSS Statistics® for Windows (v. 29.0; IBM Corp., New York, NY, USA). Descriptive statistics were used to summarize categorical variables as frequencies and percentages and continuous variables as mean and standard deviation. For inferential analysis, the assumption of normal distribution

was assessed using the Kolmogorov–Smirnov test, and the homogeneity of variances was verified using Levene’s test. Subsequently, statistical analyses were conducted using Student’s *t*-test and one-way analysis of variance (ANOVA). A *p*-value ≤ 0.05 was considered statistically significant.

3. Results and Discussion

A total of 205 parents participated in this study. Most of the children were male, younger in age, and admitted in urgent situations—findings consistent with the existing literature [9]. Most parents were female, aged ≥ 30 , and employed. Overall, they reported high satisfaction with nursing care. Interestingly, no statistically significant associations were found between satisfaction levels and parental sociodemographic characteristics as shown in Table 1. This suggests that satisfaction with nursing care in the PED setting may be more closely linked to the nature of the interaction and the quality of care rather than individual or cultural variables. Previous literature supports this conclusion, emphasizing that parental satisfaction is strongly associated with interpersonal communication, timely interventions, and perceived competence of nursing staff rather than socio-demographic factors [10].

Table 1. Participant socio-demographic characteristics and average results from scale application.

Socio-Demographic Characteristics		n	%	NCS (1–7)			ONC (1–5)		
				M	SD	<i>p</i>	M	SD	<i>p</i>
Children sex	Male	105	52.5	6.5	0.54	0.871	4.5	0.58	0.851
	Female	95	57.5	6.5	0.60		4.6	0.63	
Children age	Newborn	8	4	6.7	0.44	0.657	4.8	0.35	0.450
	Infant	62	31	6.4	0.57		4.4	0.66	
	Toddler	28	14	6.5	0.48		4.5	0.50	
	Preschool	19	9.5	6.4	0.77		4.5	0.62	
	School age	35	17.5	6.6	0.54		4.7	0.65	
	Adolescent	48	24	6.5	0.57		4.6	0.59	
Wristband color assigned in the PED	Blue	1	0.6	6.4		0.98	4.0		0.936
	Green	28	16.1	6.4	0.61		4.5	0.64	
	Yellow	46	26.4	6.4	0.61		4.5	0.56	
	Orange	90	51.7	6.5	0.54		4.5	0.66	
Length of hospital stay (hours)	≤12 h	49	25.9	6.5	0.55	0.731	4.5	0.64	0.746
	13–24 h	102	54	6.5	0.55		4.5	0.61	
	≥25 h	38	20.1	6.4	0.65		4.6	0.55	
Sex of carer	Male	32	16.2	6.5	0.48	0.821	4.5	0.59	0.898
	Female	166	83.8	6.5	0.55		4.6	0.60	
Carer age (years)	≤29 years	40	20.1	6.5	0.56	0.908	4.4	0.69	0.207
	30–39 years	92	46.2	6.5	0.52		4.6	0.53	
	40–49 years	53	26.6	6.4	0.64		4.5	0.68	
	≥50 years	14	7	6.5	0.59		4.7	0.47	

Table 1. Cont.

Socio-Demographic Characteristics		n	%	NCS (1–7)			ONC (1–5)		
				M	SD	p	M	SD	p
Carer’s education (years)	Up to 6 years	12	6.9	6.3	0.58	0.161	4.7	0.44	0.029
	7–9 years	36	20.6	6.3	0.72		4.3	0.73	
	10–12 years	84	48	6.5	0.52		4.6	0.51	
	Higher education	43	24.6	6.5	0.45		4.6	0.58	
Employment status	Employed	160	83.3	6.5	0.49	0.096	4.6	0.54	0.301
	Unemployed	32	16.7	6.3	0.70		4.5	0.67	
Socio-Professional Classes	Professions in the Armed Forces	3	1.9	6.5	0.37	0.171	4.7	0.26	0.688
	Representatives of executive bodies, directors and managers	3	1.9	6.9	0.09		5.0	0.06	
	Specialists in intellectual and scientific activities	49	30.8	6.6	0.43		4.6	0.58	
	Technicians and mid-level professions	24	15.1	6.6	0.47		4.5	0.57	
	Administrative staff	15	9.4	6.6	0.36		4.7	0.33	
	Personal service, security and sales workers	36	22.6	6.6	0.43		4.7	0.55	
	Skilled agricultural, fishing and forestry workers	1	0.6	6.7			4.9	0.6	
	Skilled construction workers and craftsmen	3	1.9	6.4	0.52		4.3	1.9	
	Plant and machine operators and assembly workers	4	2.5	6.7	0.39		4.5	2.5	
Unqualified workers	21	13.2	6.2	0.79	4.4	13.2			

Although no statistically significant associations were found between satisfaction scores and parental sociodemographic characteristics, an observable pattern emerged—particularly among parents of newborns, who reported the highest satisfaction levels on both the NCS and ONC scales. While these findings must be interpreted with caution due to the lack of statistical significance, the consistency of the pattern suggests a potential relationship that warrants further investigation. Such exploratory findings, although not conclusive, may help to generate hypotheses for future studies with greater statistical power or complementary methodologies. The heightened sensitivity and emotional needs of parents during early age might influence their perception of care. This finding aligns with a study by Kwiatosz-Muc et al. [11], who reported that the age of the hospitalized child did not significantly affect parental satisfaction, but that parents of younger children, particularly infants, often express heightened emotional responses and gratitude for attentive nursing care. Although the difference was not statistically significant, employed parents reported higher satisfaction levels compared to unemployed parents. This finding suggests that employment status may influence perceptions of nursing care quality. Employed parents might value efficiency, clear communication, and structured care processes more due to their limited availability and work responsibilities. This aligns with previous studies indicating that socioeconomic and professional status can shape expectations and satisfaction with healthcare services [12]. Qualitative approaches could provide deeper insight into how employment status affects parental satisfaction. From a clinical perspective, the consistently high satisfaction scores are encouraging and reflect positively on the PED nursing staff. Nonetheless, the lack of statistically significant differentiation across groups might also suggest a ceiling effect of the measurement instrument or a homogenous

sample in terms of healthcare satisfaction. Future research could benefit from using mixed methods approaches to capture more nuanced parental experiences and identify subtle areas for improvement.

4. Conclusions

The findings revealed high levels of parental satisfaction with nursing care in the PED short-stay unit, regardless of sociodemographic background, indicating a generally positive perception of care quality. Although no statistically significant differences were observed, certain non-significant patterns—such as higher satisfaction among employed parents and those of newborns—may point to areas of interest for future research. These exploratory observations should be interpreted with caution, but they may help guide the design of studies with larger samples or different methodological approaches. Incorporating structured feedback mechanisms into routine care could further support ongoing improvements in the quality of pediatric emergency nursing.

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Informed Consent Statement: Informed consent was obtained from all subjects.

Data Availability Statement: Data is available on reasonable request to the corresponding author.

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References

1. Ali, J.; Jusoh, A.; Idris, N.; Nor, K.M. Healthcare service quality and patient satisfaction: A conceptual framework. *Int. J. Qual. Reliab. Manag.* **2024**, *41*, 608–627. [CrossRef]
2. Karaca, A.; Durna, Z. Patient satisfaction with the quality of nursing care. *Nurs. Open* **2019**, *6*, 535–545. Available online: <http://www.ncbi.nlm.nih.gov/pubmed/30918704> (accessed on 7 May 2025). [CrossRef] [PubMed]
3. Ferreira, D.C.; Vieira, I.; Pedro, M.I.; Caldas, P.; Varela, M. Patient Satisfaction with Healthcare Services and the Techniques Used for its Assessment: A Systematic Literature Review and a Bibliometric Analysis. *Healthcare* **2023**, *11*, 639. Available online: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10001171/> (accessed on 7 May 2025). [CrossRef] [PubMed]
4. Loureiro, F.; Charepe, Z. Patient Satisfaction with Nursing Care in Hospital: Concept Analysis. *Cad. De Saude* **2018**, *10*, 23–29. [CrossRef]
5. Loureiro, F.M.; Antunes, V. Instruments to evaluate hospitalised children parents' satisfaction with nursing care: A scoping review. *BMJ Paediatr. Open* **2022**, *6*, e001568. [CrossRef] [PubMed]
6. Loureiro, F.; Figueiredo, M.H.; Charepe, Z. Nursing care satisfaction from school-aged children's perspective: An integrative review. *Int. J. Nurs. Pract.* **2019**, *25*, e12764. [CrossRef] [PubMed]
7. Mucuk, S.P.; Cimke, S.R.N.; Mucuk, S.P.; Cimke, S.R.N. Mothers' Participation in the Hospitalized Children's Care and their Satisfaction. *Int. J. Caring Sci.* **2017**, *10*, 1643–1651. Available online: http://www.internationaljournalofcaringsciences.org/docs/59_1-cimke_original_10_3.pdf (accessed on 7 May 2025).
8. Loureiro, F.; Araújo, B.; Charepe, Z. Validation of the Citizen Satisfaction with Nursing Care Scale for parents of hospitalized children. *Rev. De Enferm. Ref.* **2021**, *5*, 1–8. [CrossRef]

9. Neuman, M.I.; Alpern, E.R.; Hall, M.; Kharbanda, A.B.; Shah, S.S.; Freedman, S.B.; Aronson, P.L.; Florin, T.A.; Mistry, R.D.; Berry, J.G. Characteristics of Recurrent Utilization in Pediatric Emergency Departments. *Pediatrics* **2014**, *134*, e1025–e1031. Available online: <https://pubmed.ncbi.nlm.nih.gov/25225134/> (accessed on 26 May 2025). [PubMed]
10. Sam, C.J.; Arunachalam, P.A.; Manivasagan, S.; Surya, T. Parental Satisfaction with Pediatric Day-Care Surgery and its Determinants in a Tertiary Care Hospital. *J. Indian Assoc. Pediatr. Surg.* **2017**, *22*, 226. Available online: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5615897/> (accessed on 29 May 2025). [CrossRef] [PubMed]
11. Kruszecka-Krówka, A.; Smoleń, E.; Cepuch, G.; Piskorz-Ogórek, K.; Perek, M.; Gniadek, A. Determinants of Parental Satisfaction with Nursing Care in Paediatric Wards—A Preliminary Report. *Int. J. Environ. Res. Public Health* **2019**, *16*, 1774. Available online: <https://www.mdpi.com/1660-4601/16/10/1774/htm> (accessed on 26 May 2025). [CrossRef] [PubMed]
12. Aloh, H.E.; Onwujekwe, O.E.; Aloh, O.G.; Okoronkwo, I.L.; Nweke, C.J. Impact of socioeconomic status on patient experience on quality of care for ambulatory healthcare services in tertiary hospitals in Southeast Nigeria. *BMC Health Serv. Res.* **2020**, *20*, 473. Available online: <https://pubmed.ncbi.nlm.nih.gov/32456633/> (accessed on 29 May 2025). [CrossRef] [PubMed]

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